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PART FIRST.

ORIGINAL COMMUNICATIONS.

ART. I.—*Hernia Cerebri of Traumatic Origin, with a table of thirty-one cases occurring in the New York Hospital.** By ROBERT F. WEIR, M.D.

HAVING seen three cases of hernia cerebri during my term of pupilage, my attention was very naturally directed to a somewhat more extended investigation of the subject than is given in the ordinary text-books on surgery. The results of this examination, as obtained from the works of American and European surgeons, together with the statistics of fifty-five cases collected from the medical journals and the records of the New York Hospital, are now presented.

The term hernia, or improperly fungus cerebri (encephalocele), has been given to various protrusions and growths through openings in the skull, whether congenital or accidental in their origin; those arising from the latter cause alone, will be considered in this article. Hernia of the brain, moreover, occasionally occurs from syphilitic caries or absorption of the cranial bones. Mr. Cæsar Hawkins† relates an interesting case of a man aged thirty-six years, having a pulsating tumor five inches in diameter on the upper and posterior part of the head, from the centre of which a roundish tumor, the size of a walnut, projected through the scalp. The patient stated, that two years after the swelling appeared, it became inflamed, and it was twice punctured, giving exit only to a

* A Prize Inaugural Thesis submitted to the College of Physicians and Surgeons, March, 1859.

† *Lancet*, vol. i., 1856, p. 688.

little blood. This was followed by the protrusion of the fungus through the scalp. The tumor was ligatured by Mr. Hawkins with an unfavorable result. A similar case is related by Mr. Stanley* in his paper on hernia cerebri. Of the protrusions resulting from external injury, Guthrie† describes two kinds: one, composed principally of coagulated blood, appearing immediately after or within two days of the injury, and having generally a fatal termination; the second variety is formed mostly of "brain substance," and occurs at a later period; "these protrusions rarely take place, when a considerable portion of the skull has been lost or removed, the brain being then able to expand to such an extent as the inflammatory impulse from within may render necessary." In this respect, Abernethy agrees with him. Mr. Rowe,‡ in the *Lancet*, makes three varieties: the first, arising from coagulated blood; the second, from protrusion of the brain itself; and the third, that form described as a "fungous growth," from the cerebral mass. Of the first kind, Guthrie states that the tumor is composed of blood effused in the substance of the brain, and which becomes more elevated as the inflammation proceeds, and finally protrudes through the cranial aperture; and Abernethy§ relates two cases of like nature, and offers the same explanation, stating that "the tumor is of a dark brown color, and covered generally by the pia mater; the cases are mostly fatal, and die before the fifth day." The true hernia cerebri, or tumor of brain-like substance, as already stated, takes place at a later period than the former variety, and occurs most commonly, when the cranial opening has been of greater extent than the size of one piece of bone removed by the trephine, the dura mater having either yielded directly from the injury, or from subsequent ulceration. It is not, under proper treatment, a fatal, although an extremely dangerous complication.‖

Case V. illustrates many points in the nature of this form of protrusion.

Rosanna McQuillan, aged six and a half years, was, on May 22nd, 1856, struck by a brick, receiving a lacerated wound of the scalp, and a depressed fracture of the os frontis situated a little to the left of the median line, and about three-fourths of an inch below the coronal suture. There were present slight symptoms of concussion, as partial insensibility and vomiting, which were relieved by the hemorrhage caused by the removal of several

* *Medico-Chirurgical Review*, vol. viii.
† *Commentaries on Surgery*, 1855, p. 375.
‡ *Lancet*, vol. i., 1850, p. 760.
§ *Surgical Works. Injuries of Head.*
‖ *Guthrie* (op. cit.).

loose spicula. In attempting to elevate the depressed bone, the outer table was separated from the inner, leaving the latter still driven in.

On the 26th, she was first seen by Dr. Buck in consultation, and the operation of trephining was advised and performed, the patient being under the influence of ether. Crucial incisions were made, enlarging the wound of the scalp, and the inner table found fractured and depressed. One disc of bone was removed, and the remaining portions chipped away by means of Lüer's rongeur forceps (a very effective instrument for this and like purposes). The opening thus formed was about two inches long, and one wide.

On the 27th, she was slightly feverish, with moderate acceleration of the pulse; on the 31st, the dressings were removed, and the wound found nearly all united. She continued to improve until June 7th (12th day after operation), when it was noticed that the scalp was elevated, and forced open at the anterior portion of the wound.

June 8th.—The hernia appeared as a pulsating tumor, and the dura mater was noticed to have given way at the anterior corner of the fracture. Pulse frequent. Cerebral functions unimpaired.

June 13th.—Patient weaker. Pulse still frequent. Yesterday the hernia was touched with nitrate of silver in substance. To-day a portion of the tumor, about the size of a half dollar, was sliced off, which apparently consisted of brain substance; slight hemorrhage followed, which was easily controlled. Nit. Argent. was then applied. Discharge quite fetid.

June 14th.—Slight spasms of left side of face observed. Patient weaker and more irritable. Skin hot and dry. Discharge somewhat less, though most profuse in the morning. Arg. nit. reapplied.

June 17th.—(10th of hernia).—Spasms ceased. Pulse full, and moderately accelerated. Excised by ligature and scissors the whole protruding mass, which was about the size of a flattened hen's egg. No pain was experienced during the operation; the hemorrhage was trifling and readily arrested. The exposed surface of the brain was then touched with lunar caustic, and a compress applied by means of a circular piece of thick pasteboard, with several thicknesses of lint interposed, and the whole bound down by a bandage. The portion removed was unquestionably cerebral substance, the gray and white matter being distinctly visible.

June 23rd.—(16th of hernia).—Suffered no ill effects from the compression. Rested well. Pulse 118. On taking a deep inspiration, the brain hollows in to the depth of nearly an inch.

To-day, while removing the dressings, the effort of crying caused a jet of transparent fluid to be thrown from an opening in the centre of the exposed brain. This was repeated several times, and was supposed to proceed from the ventricle.

June 28th.—(21st of hernia).—Since yesterday, when the right side was convulsed, she has been in a comatose state. Pulse 130, and small. On examination of the wound to-day, there was found at the anterior part of the opening in the skull, a depression of the inner table, which was salient, projecting inwards, and sharp and rough on its edge. It must have escaped notice at the operation, although the bone was cut away to a considerable extent; it was at this point that the dura mater first gave way. Two openings, each the size of a goose quill, were seen in the middle part of the cut surface of the brain and through which the watery fluid, though less, still continued to ooze. The patient lingered until one o'clock the next day, dying in convulsions.

No necroscopy was allowed, but from external inspection, it was noticed that the brain had receded from the cranial aperture to such an extent that an egg might have been received into the cavity thus made. The two foramina, above-mentioned, were widened and separated by a narrow band of cerebral substance one-fourth of an inch in width. Through these canals the expanded ventricle could be seen.

The *excised portion* on the tenth day of the hernia, was in a sloughy condition, and was examined microscopically by Dr. Clark (vide, p. 302).

Of the third variety, or those tumors resulting from exuberant granulations from the brain, the following is an example:

Case XXXII.—Joanna Murphy, aged twenty-two, was admitted into the New York Hospital, October 26, 1858, with a compound depressed fracture of the skull, caused by blows inflicted with a hatchet in the hands of a person who attempted to take her life. The wound was situated over the left parietal bone, and was about four or five inches long, extending forward in nearly a direct line from the boss of that side. She was much prostrated and delirious from shock and loss of blood. There was also slight paralysis of right arm.

October 27th.—Was delirious all night. Pulse 96, and irritable. Pupils dilated. This afternoon patient was etherized, and two small portions of bone, irregular in shape, were removed. The dura mater, as well as the brain, was found lacerated. Lips of wound were brought together by sutures, and a compress and light bandage applied.

November 6th.—For several days past, she has had increased heat of skin, and a rapid pulse, from 115 to 130. Mind undis-

turbed. To-day, a protrusion about the size of the end of the little finger was observed in the wound; pulse strong, but not very frequent; had slight glossal paralysis, shown by inability to articulate distinctly.

November 24th.—Pulse has been 96, and quite full for several days past. The tumor, about the size of a hickory nut, appeared to consist of a mass of exuberant granulations. Paralysis of arm had diminished.

November 28th.—Has had three attacks of pain around the seat of injury, which were relieved by the application of leeches. At this time the granulating mass protruded about a quarter of an inch beyond the surface of the scalp, and was about the size of a walnut flattened. Argenti nitras has been daily applied to it.

December 9th.—Hernia has been nearly reduced to the level of the integument.

From that time the case progressed favorably, and she was discharged cured on the 27th of the month, no paralysis existing, and intellect being clear. She reëntered the hospital a few weeks after for the removal of some exfoliated bone.

The cause of these protrusions has been differently stated. Stanley* says, that to produce a hernia cerebri, "there must be an increase in the volume of the contused parts, caused either by a general distension of the blood-vessels of the brain, or by the addition of some new matter, as of water or pus."

Samuel Cooper† states that "hernia cerebri is a disease connected with deep seated changes throughout a great part of the brain, conjoined with the removal of bone." "The changes alluded to, may be supposed to cause an increase in the general contents of the skull, and thus a disposition to protrusion as rapid as the serum and other fluids are effused."

Brodie‡ also states, that in "compound fractures of the skull, the brain, losing the support which it derives from the dura mater, and having its vessels loaded with blood, would probably protrude in the form of what is denominated a hernia cerebri." Guthrie§ says it arises from a "low grade of inflammation of the brain;" Miller,‖ with Drs. Laurie and King,¶ ascribe its appearance to "disorganization of the brain by inflammation." Sédillot** says, that the appearance of the hernia is due to the pressure of a distended ventricle: "Dès que le

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* Op. cit.

† *Surgical Dictionary*, article "Hernia Cerebri."

‡ *Med.-Chirurg. Review*, vol. xiv., p. 395.

§ Op. cit., p. 380.

‖ *Practice of Surgery*, p. 71.

¶ *Ed. & Lond. Monthly Journal*, 1844, p. 465.

** *Méd. Operatoire*, tome 1er, 530.

crâne est ouvert, la pressure normale de l'encéphale par la boîte osseuse diminue et la sécrétion ventricale augmente sous l'influence de cette cause, et aussi en raison de l'état inflammatoire des parties," and he relates a case where a fistulous opening through the hernia communicated with the ventricle, and when it was open, the tumor did not appear, but when closed the protrusion took place. The case already quoted presents somewhat similar features, though the hernia was not noticed to recede after the escape of the fluid, probably from the fistula being minute, and from its sides readily collapsing. In the "*Compendium de Chirurgie Pratique*,"* the cause of the extrusion, is stated to be due to arterial pressure, and the formation of the tumor to be favored by a narrow cranial opening.

Propulsion from the arteries is adopted as the cause, by Flourens (Arch. Gen. de Med.) and N. R. Smith. Dr. Buck,† in his essay on this subject, asks whether "this disease may not be considered as a salutary resource of nature to relieve the brain (often only temporarily) from the compression which an increased afflux of blood, or the deposition of inflammatory products would otherwise occasion, and by which the function of this organ would be speedily interrupted," and adds, "that in all the cases in which he had an opportunity of making an examination, an abscess was found in the substance of the brain, or upon its surface in the immediate vicinity of the hernia."

Case XLV. is relevant to this point.

Patrick Cochran, aged twenty-four, was admitted into the New York Hospital, December 12th, 1852, with a compound depressed fracture of the cranium which occurred a week previous from a blow received in an affray. The wound was situated over the fronto-parietal suture, and to the left of the median line. Epileptiform convulsions, with other symptoms of compression came on within a few days, and when brought to the hospital, he was in an insensible condition; eyes fixed and staring; respiration stertorous; pulse 50, and intermitting, etc. Trephining was performed the same day by Dr. Halsted, and the depressed fragments either removed or elevated. No immediate improvement in the patient's condition was observed.

December 14th.—Was seized with a convulsion which was followed in a few hours by another. Pulse 68, and intermitting. The next day (15th) his condition was much better; convulsions had not recurred; a hernia cerebri appeared.

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* Par Birard, Denonvilliers, et Gosselin.

† *New York Journal of Medicine and Surgery*, 1840.

December 20th.—Pulse 57; still slightly intermittent in character. Hernia has not increased much, and is touched daily with the solid nitrate of silver, and moderate pressure employed.

December 26th.—General condition improved. Hernia has enlarged a little.

January 1st.—The protrusion has diminished; a small compress of sole leather, with a pad and adhesive straps have been used to effect pressure.

January 10th.—Pulse natural in force and frequency. The hernia slowly decreasing.

He progressed favorably, his mental and physical conditions being good, and was discharged cured, March 7th, 1853, having been so long detained in the hospital, to allow some necrosed bone to be cast off. Case LVII. is a very similar one.

That an opening in the skull and dura mater would allow a moderate amount of protrusion from want of support, and disturbance of the circulation by the diminution of the cerebro-spinal fluid (the "water-bed" of Dr. Arnott), the experiments of Magendie, as well as the observations of surgeons, sufficiently prove; while post-mortem dissections equally reveal, that inflammatory products are the chief agents in the extrusion. These products are, commonly, congestion or inflammation of the meninges of the brain, abscess, a distended ventricle, and effusion of blood, either upon or in the cerebrum.

Case II. is illustrative of the latter condition.

P. Delancey, aged 36 years, was admitted into the New York Hospital March 30th, 1850, with a compound depressed fracture of the left parietal bone, with laceration of the dura mater and brain, produced by a blow from a blacksmith's hammer. He was conscious but unable to speak; no paralysis of limbs or face; pupils dilated; pulse 108, full and strong. He was trephined the same day, and the fragments removed, the resulting opening being circular, and about one inch in diameter. The thumb could be passed into the pulpified brain to the depth of about one inch. Patient after the operation sat up, and signified that he felt better; his speech however was not restored; hemorrhage was considerable from the lacerated brain. In the evening, pulse having become more frequent and hard, ʒxij of blood were taken from his arm, with relief.

March 31st.—Passed a good night; no pain; pulse 102 and compressible; tongue furred, and drawn to right side.

April 1st.—Is comatose; pulse 140, weak; respiration feeble and labored. On removing the dressings a hernia cerebri was seen, the protrusion being in a softened state and easily de-

tached. A female catheter *was introduced nearly two inches* into the brain, almost without resistance, in the hope of reaching a collection of matter and discharging it. No pus however escaped. He died the next day in the same comatose condition.

Necroscopy.—The dura mater was lacerated to a corresponding extent with the fracture, and through the latter a portion of brain protruded as large as a madeira nut. Under the dura mater a small clot of blood was found below and to the outside of the laceration of that membrane. The substance of the left hemisphere was broken up to the depth of one and a half inches below the seat of fracture, but no pus was seen. The other parts of the brain were apparently healthy.

As exemplifying hernia resulting from inflammatory products, Case IV. is apposite.

Michael Mooney, aged 24, was admitted June 1st, 1848, with a compound depressed fracture of the right parietal bone, which happened two days before from the kick of a horse. Complained of "numbness" of left side. Four days after, he was trephined, and several fragments removed; the dura mater was lacerated, and the brain protruded. On the 7th pulse was 80 and full. Skin dry and hot. VS. ad. ℥viij.

June 8th.—A slight protuberance noticed in the wound; no change in symptoms.

June 10th.—Had several convulsions confined to left half of body. Intellect clear. Applied slight pressure by adhesive straps drawn across the protuberance.

June 12th.—Convulsions have hourly recurred, during which the pupils are dilated and fixed, and the action of the heart very violent. VS. repeated, and tinct. aconite gtt. j.q.2h. given. Hernia had slowly increased, and was to day excised to a level with the bone; it consisted of brain matter, the cortical and medullary portions being distinctly recognized. Pressure was then applied by means of a plate of lead the size of the opening on the skull, a few layers of lint being interposed, and over all two thick compresses, the whole being firmly secured by a bandage.

June 16.—But two convulsions since last note; pulse 66, and of natural force. Hernia reappeared to-day from the bandages slipping off during the night; it was reduced by pressure with the fingers, which procedure caused some pus and softened brain to escape. Paralysis of left side has continued.

Became comatose during the day of the 17th, and died on the 18th, at 8 A. M.

Post. mortem examination disclosed an opening in the dura mater, the edges of which adhered to the hernia at its base. Purulent lymph was found around the tumor, which had receded,

and beneath it an abcess capable of lodging the last phalanx of the thumb, extended into the corpus callosum, and to within a finger's breadth of the lateral ventricle; the surrounding cerebral substance was softened. Both ventricles moderately distended with serum. Elsewhere the brain was normal.

In the analysis of the fifty-five collected cases, Dr. Buck's method of investigation is adopted with slight modification.

Sex.—Of all the cases, but six occurred in the female sex, probably from their being less exposed to the sources of injury.

Age.—Of the fifty-five cases, the average age was about twenty years; the youngest case was two and a half years old; the oldest forty-six. Fifteen were twelve years of age or younger; between twelve and twenty years there were nine cases; between twenty and thirty there were nineteen cases; while between thirty and forty-six there were twelve cases. Of twenty-four cases, nearly one-half the whole number were under twenty years of age—forty-two below thirty years. In Dr. Buck's cases, seventeen were twelve years old or under that age, and twenty-six under twenty years. From which it appears that hernia cerebri is a disease of more frequency in children and in youth, perhaps from the cerebral circulation being then more active than at any other period of existence.

The *injury* of the head was caused in seventeen cases by falling, or projected bodies, as bricks, stones, pieces of coal, or wood, &c.; in seven by the kick of a horse; in seventeen by blows on the head, inflicted mostly by blunt instruments; in four by the discharge of fire-arms; and in ten by falls from a height, one of which struck upon a projection, and another from falling from a railroad car in motion. It will be observed from the preceding that in forty-six cases the injury was produced by concentrated violence applied by missiles or blows, while in the nine cases where it arose from falls, it is not stated whether or not the patient struck upon any sharp or projecting body.

The *seat of the wound* was in twenty-six cases over some part of the parietal region; in twenty cases in the frontal; in six the temporal, and in two the occipital region; there being nothing peculiar in this respect, as injuries calling for operation occur more frequently on the anterior and superior portions of the cranium than elsewhere.

The *lesions* were as follows: in every case but four, and one in which its condition was not noted, there was more or less laceration of the *scalp*. In one of the exceptional cases (No. XXV.) there was depression of the bony fragments, and the hernia did not appear until the 106th day, no particular complication existing with it. In every case save one, in which it is

unmentioned, the *cranium* was broken into several fragments, which were depressed to various depths. In four cases, the opening was noted as being large, and in the cases that were trephined it necessarily could not have been very small; the largest apertures, were, in Case XXXIV. four by one inches, and in Case XXVI. which was three inches in its long, and one inch in its transverse diameter. In glancing over the Hospital cases, in the annexed table, it will be seen that the cranial deficiency varied much in size, in many the aperture being more than one and a half inches in diameter. In one case it was three by two inches in extent. The amount of depression, when noticed, will also be there found. In Case III. the amount of injury received and recovered from is worthy of more extended notice.

R. G. M., aged 15, admitted September 12th, 1842, with severe compound fracture of skull, and lacerated wounds of face, having been thrown from a wagon. On examination, there was found a compound fracture with depression of the os frontis to the left of the median line. In order to elevate the fragments, a small trephine was applied to the inferior part, and by aid of forceps, the depressed portions were taken away, and the largest one, which was triangular, found to consist of the entire orbital ridge of the frontal bone, with its orbital plate. About two tablespoonfuls of brain matter escaped. The same day, pulse being frequent and hard, ʒxviij of blood were taken from the arm, which was again done on second day to the extent of ʒxiv.

September 15th.—Delirious all night; pulse 100, compressible, though before venesection it had been frequent and tense.

September 20th.—A hernia cerebri of a dark brown color had appeared, being about two inches in its perpendicular, and one in its transverse diameter. A compress of eight thicknesses of patent lint of the size of the hernia, was placed over it and confined there by adhesive straps, and over this another thinner compress was secured by a bandage; making thus considerable pressure without causing pain or other symptoms.

September 27th.—Progressed favorably. Numerous portions of cerebral substance have been discharged from the wound; a plate of lead, the size and shape of the opening, was secured by straps, and a roller over the compresses. No cerebral disturbance has at any time shown itself from the pressure.

The disposition of the hernia to protrude ceased soon after the last note. Intellect remained clear, but his sight continued double, from unharmonious action of the muscles around the eye; the wound being healed, he was discharged cured November 17th.

The *dura mater* was lacerated in forty-three cases, uninjured in five, and abraded in one; not mentioned in six. (Vide case LIV. in table.) The *brain* was injured; that is, either lacerated, soft or pulpy in thirty cases. Of these, brain matter either escaped or protruded in eighteen cases. No escape of it, the dura mater being lacerated, in two cases, while in eleven, where that membrane was injured, the condition of the organ was not stated.

The *lesions* may also be thus expressed:

Compound depressed fracture with laceration of dura mater and brain, . . .	28 cases.
Of these, in 17 brain escaped; in 11 it is unmentioned.	
Compound depressed fracture a laceration of dura mater, ...	13 cases.
In one of these, ʒiv of blood escaped, in another there was a wound of the longitudinal sinus.	
Compound depressed fracture (nothing else stated),	4 cases.
" " " dura mater intact and in one of which the brain felt softened under the membrane, . . .	4 cases.
Compound depressed fracture, dura mater abraded.	1 case.
Simple depressed fracture: in one the dura mater was wounded and had a clot under it; one the dura mater was lacerated and brain escaped, . . .	3 cases.
Comminuted fracture (simple) depression not stated,	1 case.
Depressed fracture, nothing else stated, . .	1 case.

The *hernia appeared* in twenty-eight cases on, or prior to the seventh day; in fourteen instances from the eighth to the eleventh day, and in nine from the twelfth to the thirtieth day. It occurred in two cases beyond that time, and in the remaining two cases the date of its appearance is not mentioned. The earliest period of the protrusion was in four cases, at the time of the accident or operation. In four cases it was seen on the second day after the date of injury; in the latest case, No. XXVI. already referred to, the hernia was not perceived until the one hundred and sixth day, and in another case it was not observed until the thirty-ninth day. The average time of its appearance including the extraordinary late one, was about ten days; excluding it, renders the average time eight days.

In regard to the nature of the hernial tumors, surgeons have differed much in opinion.

Stanley, Guthrie, Brodie, Erichsen, Nélaton, Miller, Lawrie & King, Buck* and Smith, agree in considering the protrusion

* Op. cit.

to be composed of brain substance in a softened or disorganized condition.

Chelius* and South† speak of it as a mass of fungous granulations, resulting from blood poured out upon, or in the brain. Sir Astley Cooper ascribes it to granulations which form and project through the cranial opening. Rokitansky‡ states that "in hernia cerebri the *brain* is protruded through accidentally "arising or intentionally made apertures in the skull and dura "mater—in a condition of inflammation or exuberant granula- "tions. Occasionally in consequence of incarceration by the "openings in the cranium and dura mater, the hernia becomes "sloughy throughout its whole mass, and is thus cast off." And also in speaking of lacerated wounds of the brain, he says, "that they heal by granulations which fill the chasm with a "cicatricial tissue, and which now and then are excessive, and "and grow outwards through the opening in the skull, forming "the so-called fungus cerebri of surgeons."

The *protrusion* in twenty-eight cases in which it was examined on dissection or excision, resembled in twenty-two, cerebral substance, the cortical and medullary portions being clearly distinguished. In four cases the hernia consisted of a clean red mass; in one case it was composed of exuberant granulations, and in one other it was "fungoid in its nature, being nothing like brain." In the remaining cases there was either no dissection, or the reports were defective in this particular.

The excised portions from Cases V. and XIX. were microscopically examined by Dr. A. Clark.§ In that from the former case no more nerve were found, but cells and granules were observed in considerable quantity. It was constituted differently in different portions; one part was composed of granules of various sizes, greatly resembling in structure the diphtheritic exudation described by Brettoneau; another part consisted of granular cells with minute nuclei; and yet another contained cells with large nuclei and nucleoli. "No part of the cranium "could produce a substance similar to the second variety." Dr. Clark says: "It is constituted altogether independent of brain "matter." In the first and second parts single fibres were seen. In Case XIX. the excised portions were twice examined; no brain substance was found under the microscope. The hernia consisted of fibrin and hæmatoidin, and a granular mass mingled with blood-vessels. In neither instance was a trace of the normal elements of the brain found, although on simple inspection the hernia closely resembled cerebral substance.

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* *Chelius*, vol. i., p. 425.
† *Chelius*, vol. ii., p. 97, note by South.
‡ *Pathologische Anatomie*, 1855, vol. ii. pp. 488 and 440.
§ N. Y. *Journal Med.*, 1857, vol. i., pp. 83 and 108.

The first specimen that was examined, was in a sloughy condition, being removed on the tenth day of its appearance. May not the gangrenous state of the tumor prevent a recognition of the nerve matter, or may not the contusion or laceration of the brain, together with the results of inflammation, destroy or change the character of the nerve-cells? Further microscopical investigations, however, are needed to settle the question of the true nature of these extrusions.*

In nine cases the hernia reappeared after excision, though probably it did so in many cases in which it is not stated. That the portion first protruded is brain matter, is most likely, but whether the reproduced tumor is of that nature, and whether the amount of internal compression is equivalent to the new extrusion, the records do not reveal.

The *size* of the protrusion varied from that of a hazel-nut to the largest (Case XV.), which was six inches by three and a half in its respective long and transverse diameters, and projected two inches beyond the level of the skull. In nineteen cases the tumor was below the size of a hen's egg; in six it was of the same size; and in twelve it was larger; not noted in eighteen cases. The *discharge* in seven cases was fetid; in three serous; in three copious, the nature of it not being remarked. In two cases pus was discharged; and in three cases there was hemorrhage from the hernia. In one case the protrusion was enveloped by an organized membrane; in three other cases it was covered with granulations; in one case the hernia was "highly "vascular and shreddy"; and in another it was of a mottled, maroon color.

Pulsatile movement must necessarily have existed in nearly all the cases, though it is so stated only in a few; in one case, however, pulsation was absent, the hernia being described as a "red mass resembling that found in an acephalous fœtus." Also in one case coughing and respiration were noticed to produce no effect upon the tumor.

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* In the *Journal* for March, 1859, p. 252, it is stated that Dr. C. E. Isaacs had examined microscopically a portion of a hernia cerebri, and found it to be composed essentially of brain matter.

A portion of a hernia, resembling brain matter, mingled with blood, taken on the second day from its appearance, from a patient now (Oct. 14) at the N. Y. Hospital, was examined by Dr. A. Clark, who reported that it was composed of varicose nerve fibres, both broken and continuous, with the nerve cells unchanged; of blood vessels in abundance, with free and contained blood corpuscles; of a few fatty vessels, and of scarcely any granular matter. He says, "It looks almost like healthy brain matter, except the broken condition of the nerve fibres."

Dr. W. H. Draper, microscopist of the Hospital, also examined a portion of the same protrusion removed on the fourth day, and obtained the same results, with the exception of an increased quantity of granular matter being found.

The *vascular system* was excited in thirty-nine cases. The pulse was slow in three cases from compression, natural in seven, and in six cases there was no note made of its condition. In twenty cases more particularly examined, the pulse before the appearance of the hernia was more or less accelerated in thirteen cases, in three it was slow, in two cases it was not excited, and in the remaining three its frequency or character is not mentioned.

The *cerebral system* was disturbed as evinced by delirium, pain, irritability, rigors, and coma, in thirty-seven instances. Paralysis existed in fifteen cases, convulsions in eight, while both were present in ten cases. In four cases there were no cerebral symptoms, while the intellect remained clear in nine cases. In Case XIX. the patient had between two hundred and eighty and three hundred convulsions of the paralyzed side of the body during the space of four days, the intellect being clear until toward the termination of the disease, which resulted fatally, the patient dying with symptoms of abcess of the brain. In another case the appearance of the hernia aggravated the symptoms. In Case XXX. where the dura mater was intact, the appearance of the tumor through that membrane relieved the symptoms for a few days, and then they returned with renewed violence. In another case where the dura mater was unruptured the patient had no bad symptoms throughout; the superjacent membrane sloughed on the eighteenth day, the hernia at the same time appearing. He recovered. In the other cases no change in the symptoms was remarked after the protrusion took place.

Termination of the disease.—Of the fifty-five cases, thirteen recovered, and forty-two terminated fatally, or about one case in every three recovered; a proportion of recoveries much less than in Dr. Buck's cases, in which about one in every two had a successful issue.* The youngest of the *fatal* cases was two and a half years old, the oldest was forty-six, the average age being about twenty years. Of these there were eleven under twelve years of age, eight between twelve and twenty, thirteen between twenty-one and thirty years, and ten over that age. Of those who *recovered*, the youngest was six years old, the eldest was also forty-six years; the average age was nearly the same as in the other cases, viz., twenty-one years. There were four cases under twelve years, seven between that age and thirty, one was over forty, and in one the age was not mentioned.

Of the *successful cases*, eight had the intellect unimpaired at

* Of his thirty-three cases, seventeen died and sixteen recovered.

the termination of the disease, one had persistent paralysis, the condition of the mind subsequent to their recovery was not noticed in five cases. The duration of the shortest case was twenty-four days from the accident, and twenty-one days from the appearance of the hernia; that of the longest was about five months. Of the *fatal cases*, the shortest duration of any case was three days from the date of the injury; the longest was one hundred and fifty-eight days. From the time of the hernia's appearance, the shortest case was one day, the longest fifty-two days, the average being about seventeen days. Three of the cases died with pyæmia.

Pathological appearances on dissection.—In twenty-seven cases necroscopies were made, and revealed the following lesions; in eight cases recession of the brain was noted though this probably existed in all, from atmospheric pressure. In seventeen cases the brain was soft, pulpy, and disorganized, in one case it was "putrid looking." In eleven cases an abscess (rarely more than one in number), was found in the hemisphere corresponding to the injured side, and generally situated immediately beneath the hernia. In one case where inspection and palpation only were permitted, a sense of fluctuation was detected below the hernia. In another, Case V. the ventricle was seen through external openings. In one case, pus in large quantity was found between the dura mater and the brain; in Case XXV. an abscess containing ʒix. of pus existed; and in Case XLIX. an abscess holding ʒvj. of pus was found. In six cases the ventricles were distended, perhaps an effect as well as a cause; in twelve cases some inflammatory lesion of the dura mater or arachnoid, as congestion, thickening, or deposition of lymph or pus, was ascertained. In five cases a clot of blood was discovered in, or upon the surface of the brain. The hernia in seven cases was examined after death, in six of which it consisted of softened brain matter; in one case it was stated to be "fungoid in its nature."

The general treatment consisted of bleeding from the head or arm, active purging, the use of cold to the head, mercury, etc., as the urgency of the symptoms required. In Case XI. nothing was done in the way of general treatment, as at the time of the injury there was a free hemorrhage from the wound.

The local treatment, which is the more interesting, consisted of the application of caustics, such as nitrate of silver, sulphate of zinc, nitric acid, both in a pure and diluted state (gtt. xx. ad. ʒj. aquæ), lime water, sulphate of copper, etc,; or by the use of compression by means of either straps of adhesive plaster, or a plate of lead or pasteboard, bound down firmly by a bandage. In a number of cases excission by the knife or

scissors was resorted to, and occasionally the ligation of the mass was employed.

The local treatment advised by European surgeons, is as follows:

Guthrie prefers the use of moderate pressure, such as can be borne with comfort and persisted in with propriety, and looks with disfavor on removal of the hernia either by caustics or by the knife. In two of his cases too firm compression of the tumor produced in one, swimming sensations, pain in the head, and retardation of the pulse; in another, syncope supervened. He also advises, that pressure should be applied lightly while the protrusion is increasing, but should be augmented when it becomes stationary, and during its diminution and recession.

Miller uses pressure, and considers ablation, except where the hernia is in a sloughy condition, to be inexpedient. The use of escharotics, he thinks, is in no case advisable. In the Compendium of Practical Surgery, pressure is recommended, it being doubted whether excision is ever necessary. Astley Cooper is also an advocate for pressure conjoined with the use of liquor calcis.

Stanley states that when a protrusion of the brain has taken place, the employment of pressure with a view to effect its return into the skull, is entirely out of the question, and confesses that he is unable to determine whether to excise the mass at once, or to allow it to slough away. At the Glasgow Infirmary,* the local treatment consists in support or moderate pressure of the tumor combined with application of stimulating or astringent dressing, as resinous ointments, blackwash, nitric acid lotion, etc. Erichsen slices off the growth to a level with the brain, and then applies a compress and bandage over the part, and considers the treatment extremely unsatisfactory, for if the tumor is shaved off, it commonly sprouts again until the patient is destroyed by the irritation and coma conjoined.

At the New York Hospital, pressure is at first resorted to, graduated according to its influence on the cerebral functions, if this does not suffice, caustics and excision are employed; the latter especially, if the hernia be large. Frequently, the sloughing produced by the strangulation of the mass, is of itself adequate to its removal, and sometimes the protrusion spontaneously subsides. Pressure, in the Hospital, is generally applied by means of a plate of lead the size of the cranial vacuity, placed over the aperture with several thicknesses of lint interposed, and the whole secured by a firm bandage, which serves quite effectually to control any disposition to protrusion of the

* Laurie & King, op. et loc. cit.

tumor. With these means the occasional use of the solid nitrate of silver is combined.

The method of treatment pursued in the collected cases, was as follows: in the whole number of cases, excision was practised seventeen times, in six of which it was noted that no pain was experienced from the operation, in four cases the hemorrhage was slight, while in two cases it was free. Caustics were used in seventeen cases, and no ill effects followed their application in any instance. In thirty-two cases, compression was employed, in six of which disagreeable symptoms resulted, such as coma, vomiting, dizziness, and syncope, and once, facial paralysis; no bad symptoms followed in eleven cases, and in one the patient felt better after the compress and bandage had been applied. In only three cases was the ligature employed, while in thirteen cases, all of which were fatal, nothing was done locally. Ice to the hernia was used in two cases, both of which died.

In the *fatal* cases, forty-two in number,

Caustic, with compression, excision, and the ligature, was used in	1 case.
Caustic, with compression and the ligature, in	2 cases
Caustic, with excision in	1 case
Caustic, with compression, in	2 cases
Caustic, with compression and excision, in	4 "
Compression and excision, in	8 "
Compression alone, in	5 "
Excision alone, in	1 case
Ice applied, in	2 cases
Nothing done, in	13 "
Not mentioned, in	2 "

Or, stated otherwise, caustic was employed in ten cases, compression in twenty cases, excision in eighteen, and the ligature in three. In four cases, pressure was not tolerated, inducing one or more of the before enumerated symptoms. In case XXII. the tumor was excised, and then the surgeon " dug away the mass to below the level of the skull, without any ill effects, though compression was not well borne." In two cases, pure nitric acid was used without any consequent ill effects.

In the treatment of the thirteen *successful* cases,

Caustic, alone was relied on in	1 case.
Caustic, with compression and excision, employed in	2 cases
Caustic, with compression and excision, employed in	4 "
Compression alone used in	5 "
Compression with excision, succeeded in	1 case

In one, dry sulphate of zinc was kept applied to the protrusion without ill consequences.

Tabulated differently, it is found that in twelve cases pressure was used, in three of which, no ill effects arose, in one, it produced vomiting, and in another syncope and giddiness. Caustics were applied in seven cases, and in three, ablation of the tumor was practised.

It is worthy of notice, that in the unsuccessful cases, eighteen were treated by excision alone or combined with other means, or one in every $2\frac{1}{3}$ cases, while in those cases that resulted favorably, only three were so treated, being only 1 in $4\frac{1}{3}$ cases.

On reviewing the results of the post-mortem examinations, it was observed that in seventeen cases, thirty-one per cent. of all, or forty per cent. of the fatal cases, there was either an abscess or a distended ventricle found, and in eleven cases, the abscess was directly below the hernia. A fact bearing pertinently on the plan of treatment practised by Nélaton and Dupuytren. The former in his *Pathologie Chirurgicale* * says, "on a plu-"sieurs fois pratiqué des incisions du cerveau pour évacuer "un foyer, et l'on n'a pas remarqué qu'elles aient aggravé les "symptoms, loin de là elles ont été quelque fois utiles," and cites the example of Dupuytren, who plunged a bistoury into the brain, evacuating thereby an abscess; "heureuse audace, "digne du génie le plus éminent chirurgicale des temps "modernes et qui sauva le malade!" exclaims Nélaton.

Remarks.—From the examination of the fifty-five cases, it is seen that a fracture of the skull with depression, is the only condition essential to the formation of a hernia cerebri: it is also well known that this disease does not always ensue even in cases most favorable to its appearance, as for instance in laceration and escape of the brain. Dr. Buck, in the examination of sixteen cases of injury without hernia did not detect any peculiarities in the primary injury, "nor," he says, "does a "comparison of the symptoms indicative of cerebral inflamma-"tion, show the reason of its appearance in some cases, and its "absence in others; we find in both inflammation existing, in "various degrees."

Concerning the frequency of the occurrence of hernia cerebri, the following may be of some value. In one hundred and twenty-eight cases of various fractures of the cranium occurring in the New York Hospital from 1839 to 1851, there were ten cases of hernia, being about eight per cent., and in fifty-seven operations for fracture of the skull reported in the London and *Edinburgh Medical Journal* for 1844, there were fourteen cases of hernia resulting, or one in every four cases.

* Tome IIe 557, 573.

When considering the proportion of recoveries, it must be remembered that more successful cases are made public than unsuccessful ones, hence, a more reliable ratio is that obtained from the hospital cases, thirty-one in number, in which there were five recoveries and twenty-six deaths, that is to say, about eighty-four per cent. of the cases terminated fatally.

List of the cases and where collected.

1–4.—Hospital Records.
5.—Practice of Dr. Buck.
6–8.—Hospital Records.
9.—Lancet, Vol. I., 1848, p. 305.
10. " Vol. I., 1848, p. 306.
11. " Vol. I., 1850, p. 406.
12. " Vol. I., 1850, p. 760.
13. " " " "
14.—Miller's Practice of Surgery, p. 75.
15.—British and Foreign Medical Review, 1840.
16.—London and Edinburgh Monthly Journal, 1841, p. 150.
17.—Lancet, Vol. II., 1846, p. 503.
18.—New York Journal of Medicine and Surgery, Vol. IV., p. 307.
19. " " " Vol. I., p. 83, 1857.
20.—Guthrie's Commentaries, p. 377.
21. " " " 378.
22.—London and Edinburgh Medical Journal, 1844, p. 465.
23. " " " p. 468.
24. " " " p. 469.
25. " " " p. 470.
26. " " " p. 471.
27. " " " p. 472.
28. " " " p. 474.
29. " " " p. 475.
30. " " " p. 476.
31. " " " p. 477.
32.—Hospital Records, 1858.
33.—Lancet, December, 1858.
34.—Medical Times and Gazette, December, 1858.
35–57.—Hospital Records.

A Table of Thirty-one cases of Hernia Cerebri, occurring in the New York Hospital from 1837 *to* 1859.

Sex. Age.	Mode of Violence. Seat of Injury.	Lesions.	Date of Appearance and Character.	Vascular and Cerebral Symptoms.	General Treatment. Termination.	Local Treatment.	Post-Mortem Appearances.	Reference. Surgeon.
F. 8	Falling piece of timber. Left parietal os.	Comp. dep. fract., with laceration of brain and d. mater.	7th day. Symptoms relieved by its appearance. Not mentioned.	Pulse strong and frequent. Intellect clear until near end.	VS. Tart. Antimony. Died 24th day fr. accident, with symptoms of abscess.	Ice applied to tumor.	None.	Hospital Records, 1837. Case 25. Dr. J. Kearney Rodgers.
M. 10	By a gate falling upon him. Left Parietal and Frontal and sphenoid.	Comp. dep. fracture, with laceration and escape of brain to amount of ℥ss. Opening large.	7th day. Size of Walnut. Considered to be brain substance.	Pain in head, frequent pulse, feb. action. Paralysis of right arm. No change after hernia appeared.	Cold to head. Calomel. Died 18th day. Comatose.	Compression with no ill effects. Excision, and hernia reappeared next day.	None.	Hospital Records, 1838. Case 36. Dr. J. Kearney Rodgers.
M. •17	Fall fr. a height. Left os frontis.	Comp. dep. fract., with laceration of dura mater, and escape of brain. Opening large-involving orbit.	6th day. Large as a butternut, and composed of brain. Purulent discharges.	Hernia preceded by del'm, frequent pulse, &c., which ceased after tumor appeared, leaving mind clear.	Bleeding and moderate purging. Recovered in ab't 2 months. Intellect clear.	Excision, compression and caustics. No pain. Pressure well borne.		Hospital Records, 1839. Case 37. Dr. Gurdon Buck.
M. 30	From blasting rocks. Left os frontis.	Comp. dep. fract., with injury of dura mater and protrusion of brain. Fract. call'd 'extensive.' Opening 1¼ in. diam. and circular.	3d. day. Considerable discharge.	Intermittent pulse only symptom noticed. Sensible throughout, with nothing unfavorable.	Bleeding and moderate purging. Recovery 24th day. Mind clear.	Compression, excision and caustics. Hernia reappeared after ablation.		Hospital Records, 1840. Case 38. Dr. Hoffman.
M. 15	Thrown from a wagon. Left os frontis.	Comp. dep. fract.; dura mater and brain lacerated. ℥js of brain escaped. Depression 1 inch.	8th day. Size, 2 inches perpendicular, 1 in transverse diameter.	Considerable vascular excitement, but little central disturbance.	VS. Recovery in about 2 months. Intellect clear.	Compression used, wh. did not aggravate symptoms.		Hospital Records, 1842. Case 3. Dr. Buck.
M. 24	Kick of a horse. Right os parietale.	Comp. dep. fract., with dura mater, and brain lacerated.	7th day. Size of a tablespoon and of brain substance. Pus discharged.	Pulse natural. Left side paralyzed. Intellect intact.	Bleeding. Died on 21st day.	Excision, and arg. nit. No pain; but little hemorrhage.	Pus in sulci by side of hernia, and beneath it an abscess found. Brain soft and pulpy.	Hospital Records, 1848. Case 4. Dr. Hoffman.
M. 2½	Falling from a height. Right temporal.	Simple dep. fract., with laceration of dura mater and protrusion of brain. Fract. extensive, and comminuted.	10th fr. injury. 5th day fr. operation. 'A small knuckle of brain.'	Preceded by paralysis of left side, and by symptoms of compression. Pulse much accelerated. No change after hernia appeared.	Cold to head. Died 11th day in convulsions.	Cold to head the only treatment mentioned.	None made.	Hospital Records, 1848. Case 39. Dr. Hoffman.
M. 27	Kick of a horse. Os frontis.	Comp. dep. fract., laceration of dura mater, and escape of ℥iv. of blood. Opening size of quart. dol.	39th day. 'Somewhat large.'	Had almost recovered when on 26th day had pain in head; pulse frequent, and afterwards slow and weak. Symptoms not relieved by appearance of hernia.	VS. and purging. Died on 46th day.	Excision, and pressure by lead plate. No ill effects from compression.	A large quantity of grumous blood in the left hemisphere, which was softened.	Hospital Records, 1849. Case 40. Dr. Rodgers.

				appearance of hernia.					
M. 27	By a falling stone Temporo - frontal region.	Comp. dep. fract., with laceration of dura mater and brain. Fract. very "extensive."	5th day. Protruded 1¼ inches.	An attack of vomiting preceded the hernia. Pulse frequent, and patient very restless and delirious. Oozing of blood was present. No paralysis.	Cold to head and purging. Died on 6th day.	Locally nothing.	A large clot, ½ inch in thickness, was found outside the dura mater. Right hemisphere softened. Fracture extended to base.	Hospital Records, 1849. Case 41. Dr. A. C. Post.
M. 36	Blow from a hammer. Left parietal region.	Comp. dep. tract., with laceration of dura mater and brain, latter to depth of 1 inch. Free hemorrhage.	3d day. Size of a Madeira nut, and of softened brain.	Frequent pulse. Stupor, and other symptoms of compression.	Bleed'g and purging. Died 4th day. Comatose.	Locally nothing.	A clot found between brain and dura mater. No pus. Left hemisphere pulpefied 1½ inches in depth at seat of injury.	Hospital Records, 1850. Case 2. Dr. G. Buck.
M. 22	Blow from a shovel. Parietal region.	Comp. depressed fract., with laceration of dura mater and brain. The latter pulpy.	6th day. 4¼ inch. long by 2 wide. Semiputrid brain. Disch fetid, hernia sloughy.	Preceded by frequent pulse and delirium. Pain in head. Symptoms not relieved by hernia. Paralysis of left side of body and face. Died comatose and with symptoms of compression.	Leeching and purging. Died 13th day, comatose.	Nit. Argent. Compression and excision by ligature. Slight hemorrhage. Pressure produced stupor, insensibility. H. reappeared.	A large quantity of fetid pus between dura mater and brain, which latter was coated with purulent lymph—H. had receded.	Hospital Records, 1850. Case 1. Dr. Gurdon Buck.
M. 22	From a blow. Right os frontis.	Comp. depressed fracture. Dura mater lacerated. Opening ¾ inch in diameter.	19th day. Protruded 1¼ inch.	Before hernia appeared intellect clear. No paralysis. Great pain in head, to which succeeded paralysis of left side of body and coma.	Cold to head and purging. Died 23d day, comatose.	Locally nothing.	Adhesions, pus found between membranes. Anterior lobe of right hemis. disorganized and soft.	Hospital Records, 1851. Case 42. Dr. A. C. Post.
M. 24	Fall fr. a height. Right parietal region.	Fracture with depression. (Nothing else stated.) Opening size of a silver dollar.	4th day. No description.	Preceded by febrile excitement. Delirium. Frequent pulse, stupor, and twitchings of face, and paralysis of right side of body. No change after hernia appeared.	General bleeding. Died 6th day.	Locally nothing.	None made.	Hospital Records, 1851. Case 43. Dr. R. K. Hoffman.
M. 30	Fall fr. a height. Left os frontis.	Simple comminuted fract. (dep'n not noted). Dura mater not wounded. Opening over 1 sq. inch.	15th day. "Resembled brain."	H. discovered on opening an abscess at seat of injury. There was great disturbance of the system from other severe injuries, as fract. femoris and both arms.	None mentioned. Died on 26th day.	None stated.	A clot found on outside of dura mater, and that membrane was lacerated.	Hospital Records, 1852. Case 44. Dr. G. Buck.
M. 24	Struck by a stone Left parietal region.	Comp. fract. with depression to depth of ¼ inch. (Nothing else stated.)	10th day, or 3d after operation. No description.	Preceded by symptoms of compression, which were relieved by trephining, and by convulsions which stopped when h. appeared. Did well after which.	Recovered in 90 days. Retarded by dead bone being cast off. Intellect clear.	Nit. Argent. and pressure by a leathern pad.		Hospital Records, 1852. Case 45. Dr. T. M. Halsted.
M. 12	Fall from a R. R. car. Right parietal region.	Comp. dep. fract. dura mater, but brain felt softened under it. Opening 3 by 2 inches. Depression amounted to ¾ inch.	6th day. Size of ¾ medi'm orange. Called cerebral substance.	On 5th day paralysis of left side and stupor. D. m. was tense, and on being punctured gave exit to a free discharge of pus. 2 herniæ, separated by a band of d. m., seen, which was divided, and allowed brain to protrude freely. Pulse not very frequent. Hernia induced no change.	Ice to head, &c. Died on 11th day.	Excision and compression. No ill effects from latter. Great disposition to protrusion when pressure taken off.	Both hemispheres and base covered with creamy pus, especially the right, which was softened and disorganized around seat of hernia.	Hospital Records, 1853. Case 46. Dr. Buck.
M. 14	Fall fr. a height. Right os frontis.	Simple depressed fract. with laceration of dura mater, and a clot beneath it. Opening was 1 by 1½ inches in size.	4th day. 5th day it broke down, and both it and clots oozed from the wound.	Preceded by delirium, feb. excitement, frequent and full pulse. No change noticed after hernia appeared.	Leeches, calomel, and cold to head. Died on 6th day.	Pressure.	No necroscopy allowed.	Hospital Records, 1853. Case 47. Dr. Halsted.

A Table of Thirty-One Cases of Hernia Cerebri, occurring in the New York Hospital from 1837 *to* 1859. —*Continued.*

Sex. Age.	Mode of Violence. Seat of Injury.	Lesions.	Date of Appearance, and Character.	Vascular and Cerebral Symptoms.	General Treatment. Termination.	Local Treatment.	Post-Mortem Appearances.	Reference. Surgeon.
M. 17	Falling from a car in motion, striking a projection. Left *occipital* region.	Comp. depressed fracture, with laceration of dura mater and escape of brain. Fract. of several fragments and styled "extensive."	14th day. Size of a small orange. Cerebral substance, sloughy.	Preceded by febrile excitement, with accelerated pulse. Paralysis of right arm. Mind clear. Succeeded by a less rapid pulse; glossal paralysis and coma.	None, except febrifuges. Died on 41st day, comatose.	Comp'n by zinc plate, ligature. Argent. nit. and nitric acid pure, were also used. No ill effects from pressure.	Superior surf. of left hemisphere was collapsed, and covered with pus at post. part.; its substance softened. Ventricles distended with serum.	Hospital Records, 1854. Case 48. Dr. Buck.
F. 4	Gunshot wound. Os frontis.	Compound fract., with depression and protrusion of brain. Opening size of a bullet, which was increased by the trephine.	5th day. "Quite large," of broken down and sloughy brain.	Accelerated pulse, disturbed intellect, paralysis of right arm, preceded the hernia, from the 2d day of which but slight symptoms, then convulsion of sound side.	Cold to head, low diet and purging. Died on 40th day.	Locally nothing.	Abscess holding ℥vj. of pus, communicated with the wound by the track of the shot. Brain on that side softened. Fract. also of os occipital.	Hospital Records, 1854. Case 49. Dr. Cheesman.
M. 28	Blow from an axe. Left occipito-parietal suture.	Comp. dep. fract., with laceration of dura mater. One fragment was of the size of quart. dol.	17th day. Called a "hernia of the brain."	Pain in head, slow pulse, paralysis of opp. side, with other symptoms of compression.	Blisters, purging, and by calomel. Died on 28th day.	Excision, hernia reappeared; then pure nitric acid.	No necroscopy made.	Hospital Records, 1854. Case 50. Dr. Cheesman.
M. 21	Fall fr. a height. At vertex.	Comp. dep'd fract., with wound of dura mater, and escape of brain. Opening was semilunar, and 2 inches long. Complicated with fract. of the pelvis.	6th day.	Had paralysis of right side and convulsions before hernia appeared, which increased until termination. Not much arterial excitement either before or after hernia appeared.	Died on 26th day.	Excision and caustics freely. Hernia continued to protrude after excision.	No necroscopy made.	Hospital Records, 1855. Case 51. Dr. Jno. Watson.
M. 35	Fall fr. a height. Right os frontis.	Comp. depressed fracture, with laceration of dura mater. Opening in skull 1½ inches in diameter.	4th day. A pulsating tumor in wound. Small in size.	Appearance of hernia coincident with symptoms of compression Paralysis of *right* side came on.	Cold, calomel, cathartics. Died on 8th day.	Moderate pressure.	Abscess in brain directly below hernia; also a small one in *left* hemisphere. Pus between membranes.	Hospital Records, 1855. Case 52. Dr. T. M. Markoe.
F. 8	By a falling brick. Vertex.	Comp. dep. fract., with wound of longitudinal sinus. Opening in skull 1 by 1½ inches.	7th day.	Preceded by chills, spasms, and strabismus of left eye, which continued after hernia appeared, with also paralysis of right side.	Cups, cold to head, cathartics and calomel. Died 19th day. Comatose.	Locally nothing.	A deep abscess at seat of fracture and softening of brain in vicinity. Another abscess postr. to 1st, and clot at base of brain.	Hospital Records, 1855. Case 53. Dr. Markoe.
M. 36	Blow from a falling stone. Left parietal region.	Comp. dep. fract., with no laceration of dura mater. The fract. was about 3 inches long.	7th day. Size of end of little finger; disappeared in 18 days.	Preceded by pain in the head, rapid pulse, and slight paraplegia. Succeeded by flying visits of paralysis and stupor.	Died 26th day. Comatose.	Firm pressure employed, and hernia disappear'd in 10 days. Probably the d. mater did not give way.	Pus in large q'ntity bet'n. membranes of left side. Brain on that side soft'nd. D. m. only abraded; hernia had not broken through it.	Hospital Records, 1856. Case 54. Dr. Watson.
M. 31	Blow from a hammer. Left parietal region.	Comp. dep. fract., with laceration of brain and dura mater. Brain softened.	11th day. Size of hazel nut. White and leathery looking. Pulsating.	Preceded by accelerated pulse and convulsions.	Bleeding and purging. Died on 18th day.	Locally nothing.	Hernia receded. Brain was softened.	Hospital Records, 1857. Case 6. Dr. Buck.

M. 14	Blow from flying capstan. Right temporal region.	Comp. dep. fract., with laceration of dura mater and brain, with escape of latter. Fracture "extensive."	2d day. Oblong in shape, 2 or 3 inch. long. "Softened and congested brain."	Pulse rapid and quick. Great restlessness. Skin hot. Respiration stertorous. Left side paralyzed at time of injury. No change in symptoms. Hernia sloughy.	Cold to head and stimulants. Died 3d day.	Locally nothing done.	Inspection only allowed. The dura mater was lacerated some 2 or 3 inches.	Hospital Records, 1857. Case 55. Dr. W. Parker.
F. 23	Blow with a hatchet. Left os frontis.	Comp dep. fract., with laceration of dura mater.	13th fr. accident, 3rd day from operation. Broken down brain. Toward termination the hernia scabbed over.	Before operation symptoms of compression were present, and by which they were slightly relieved. Pulse rapid and full. Hemiplegia of right side, and convulsions throughout case.	Cold, purging, blistering and trephining. Died on 19th day.	Locally nothing.	At *operation* the d. mater was found thickened and lacerated. Two-thirds left hemisphere was broken down into a pinkish mass, forming an abscess. Pus found in circulation.	Hospital Records, 1858. Case 56. Dr. Markoe.
F. 22	Blow from a hatchet. Left parietal region.	Comp. dep. fract., with laceration of dura mater and brain.	10th day. Dark col'rd, size of hickory nut. Compos'd of exuberant granulations.	Preceded by pain in head. Paralysis of arm and tongue.	Leeching p. r. n. Recovery 61 days, with intellect clear.	Argent. nit. in substance, and slight compression.		Hospital Records, 1858. Case 32. Dr. Markoe.
M. 4	Kick of a horse. Os frontis.	Comp. dep. fract. Dura mater intact.	5th day. Tumor of a mottled maroon color. Covered with granulations.	Accelerated pulse, pain in head. Shrieking, with clenched hands, both before and after hernia appeared. Vomiting increased protrusion very much.	Ordinary treatment for inflam. Died on 14th day.	Nothing locally.	No necroscopy.	Hospital Records, 1858. Case 7. Dr. W. H. Van Buren.
M. 32	Struck by a conch shell. Right parietal region.	Comp. dep. fract., with laceration of dura mater and brain, with escape of latter.	9th day. Pulsating tumor. "Not very large."	Inflammatory symptoms present. Vascular system much excited. Toward termination, however, p. was 52. 2d day from operation had 2 convulsions, which did not recur on opening the wound.	Cups, calomel and cathartics, with blisters. Died on 32d day, comatose.	Nothing locally.	Much congestion of membranes. Just below cranial opening, an abscess with firm walls was found on the brain, and whole right hemisphere was softened.	Hospital Records, 1858. Case 17. Dr. Halsted.
†M. 26	Buried by an embankment. Left parietal region.	Contused wound of scalp. Potts' puffy tumor. Symptoms of compression. Trephined. Also comp. fract. of left leg.	31st day, 3d from operation. Size of hickory nut.	Symptoms of comp'n came on, accompanied by epileptiform convulsions, for which he was trephined. D. m. was thickened, and there was effusion under arachnoid. Was relieved for a short time by the operation.	Stimulants and tonics. Died 34th day.	Nothing done.	Brain was filled with abscesses. 3 principal ones. 1st, one penetrated into right ventricle, and communicated with the cranial aperture. Another abscess was found in centre of right hemisphere. These abscesses had pyogenic membranes. Brain around them was much softened.	Hospital Records, 1858. Case 57. Dr. Parker.

* Quoted in Dr. Buck's Essay on this subject, and introduced into statistics.

† This case was not obtained in time to be incorporated in the statistics.

ART. II. *Transactions of the Kings County Medical Society.* Prepared by a Committee of Publication.

APRIL—*Rupture of Uterus.*—DR. LANDON related a case of Ruptured Uterus. About a month ago he was called in haste to attend a woman in Plymouth street, who was reported to be dying. He found her almost pulseless, faint, gasping with a sighing inspiration; she had been in active labor for 24 hours; the pains had been severe up to 8 o'clock that evening, when they ceased. An examination showed the head was impacted in the superior strait, the uterus was flaccid, and the feet could be felt in the left side of the abdomen. The forceps were applied, and with great difficulty the delivery was effected. Diffusive stimuli—brandy and carb. ammonia were administered, but she died about 1 o'clock, A. M.; the rupture having occurred at 8 o clock in the evening. An autopsy was held the next day, which verified the diagnosis. The rupture was on the posterior portion of the right side of the uterus, extending from the lower portion of the cervix half the length of the organ.

DR. MITCHELL stated that this was an interesting case, from the rupture occurring at so low a point. It usually occurred higher up.

Albumenurea.—Dr. Landon detailed a case of albumenurea occurring in his hospital practice. The patient was admitted in an anasarcous condition, with his urine loaded with albumen. The treatment consisted in the use of the hot-air bath, blue mass in small doses, and the bowels kept soluble with small doses of rhubarb and soda. Under this treatment, his condition improved to such a degree that he appeared the picture of health. The albumen entirely disappeared from his urine; his step was strong and firm, and his cheek was ruddy. He eloped while in this condition, and in a week he was brought back to the hospital in an almost moribund condition. He stated that he had passed no water for three days; the catheter was introduced, and only a few drops of thick fluid withdrawn. His limbs and body were œdematous; but his mind was perfectly clear. He died soon after. The autopsy revealed enlargement of the kidneys with fatty degeneration. The case presented two points of considerable interest. The sudden death following an apparent cure; and 2nd, his mind being so perfectly clear when urea must have been circulating in the blood.

Dr. Mitchell stated that the urea was frequently secreted in an almost solid condition, and that corrosive sublimate would often reveal the albumen where heat and nitric acid failed to indicate its presence.

Dr. Landon, in the treatment of these cases, approved of the

use of the hot-air bath, with the blue mass in small doses, the bowels being kept open with rhubarb and soda. He had seen the most beneficial results in one case from the use of large doses of tannic acid.

Dr. Landon related a severe case of eczœma impetiginodes, in which complete cure followed *vaccination*, when he had tried other remedies without success.

Dr. Enos related a case of eczœma impetigniodes in which he had tried vaccination without success.

Dr. Enos spoke highly of the results obtained in the treatment of syphilitic condyloma with tannic acid. These excresences, which are usually removed, or destroyed with nitric acid, causing great pain to the patient, he had found the use of the strong solution of tannin would completely cure. He used a solution of ʒ of tannic acid to ʒ of water.

Dr. Enos also detailed a case of albumenurea and cardiac disease, in which the specific gravity of the urine was 1040. He had consulted the various authorities, and had found only one case of albumenurea recorded in which the specific gravity was anything like that in this case. That was recorded by Golding Bird, where the specific gravity was 1051.

Compound Dislocation of Elbow joint.—Dr. Enos detailed an interesting case of compound dislocation of the elbow-joint. The humerus was thrown forward and completely denuded. The dislocation was easily reduced, but the patient had had several attacks of erysipelas, and several portions of necrosed bone had been removed. He will recover with the arm in a flexed position, anchylosed. He would expect a much better result in these cases from immediate exsection of the joint. He had a case of compound dislocation of the elbow, three years years ago ; repeated attacks of erysipelas followed, and the arm was finally lost. If he had another case he should immediately exsect.

Dr. Johnson was in favor of exsection in these cases, if the main arteries and nerves were uninjured. The best results that could be hoped for in cases of compound dislocation would be partial or complete anchylosis, while in cases of exsection the patient ultimately regained a joint nearly as good as the original. He was much pleased with the result of a case of exsection performed by Dr. Stephen Smith, while he was resident surgeon in Bellevue Hospital. In that case there was caries of the olecranon. Exsection was performed, and so perfect a result was obtained that the girl went out to do general housework, and the family was not aware that there was any difficulty about the joint. Miller and modern surgeons approved of exsection in compound dislocation when the large vessels and

nerves were uninjured. He had a case in some degree illustrating this in his service at the Long Island College Hospital, in which a barrel of flour had fallen upon the hand of a woman. The chimes of the barrel had laid open the metacarpo phalangeal articulation of the thumb and three fingers, and comminuted the ends of the bones. The injury was so extensive that immediate amputation was proposed. In this case the ends of the bones were removed, the tendons trimmed away, the lacerated edges of the wound trimmed, approximated and dressed as an ordinary incised wound. A slight sloughing of the flap occurred, but it granulated and passive motion has been established which will undoubtedly give her a good use of the hand. He regarded this as far preferable to amputation.

Purpura Hemorrhagica.—Dr. Dudley narrated a case of a woman who had been under his charge for seven years, with recurring cardiac disease, the result of rheumatism. This year the rheumatism ceased troubling her, and purpura hemorrhagica had appeared. Dr. Mitchell had seen her in consultation. The treatment had consisted of quinine, and iron, and turpentine. Bullæ appeared in the mouth, and the spots of purpura were very large, appearing on the left shoulder and arm: one of the spots on the nates was so large that it could hardly be covered with the two hands.

Hemorrhage from the Bowels.—Dr. Enos stated that he had a large number of cases of hemorrhage from the bowels—six cases in ten days. One was a little child seven months old, which seemed troubled with indigestion, without much fever, no tenesmus, but with from six to twenty stools a day, and passing blood with each stool. The child died. The autopsy revealed intense congestion of the whole of the large intestine, but no ulceration. In another case he had found large clots of blood passed by the stools which must have coagulated in the large intestines, as they bore the marks of the sacculi.

Periostitis of upper portion of Femur.—Dr. Johnson reported a case showing the extreme difficulty in forming a correct diagnosis. The patient was a young lady of about nineteen years, with light hair and blue eyes;—some time ago she fell, striking on the hip;—she had been cupped by the physician who had attended the case. The difficulty was not relieved. Some two months ago, Dr. Johnson saw the case, it had then all the symptoms of morbus coxarius of an advanced stage. The characteristic malposition of the limb noticed in cases of morbus coxarius, was marked in this case. The limb was flexed at both hip and knee joints. The knee was turned inward, overriding the other knee. The tendons of the adductor muscles of the thigh were strongly marked and tense. The patient was un-

able to bring the heel down to the floor ; the toes turned inward toward the instep of the opposite foot ; the hip was full and the integuments swollen over the joints ; the natis of the affected side was flattened ; pressure over the affected joint gave intense suffering ; rocking of the limb or crowding the femur against the acetabulum caused such intense suffering that the patient would not allow it to be touched, for fear we should move it. The pain was ordinarily felt in the knee joint, and at times this was so severe that it was hardly possible to persuade her that the knee joint was not diseased ; she had those sudden darting pains at night, awaking from her sleep with a shriek—pains, which by some, are regarded as diagnostic of morbus coxarius, and these were so intense that anodynes administered in large doses, failed to produce sleep.

Dr. Mason saw the case in consultation. The patient was brought under the influence of chloroform and the limb again examined ; it was as immoveable as before, carrying the pelvis with it when the femur was rocked ; the adductor muscles were tense and unyielding. With Dr. Mason's approval, Dr. Johnson introduced a small trocar into the joint, for the purpose of drawing off the accumulated fluid, and which otherwise must gain an exit by ulcerative destruction of the articulation. To their surprise, no fluid was discharged through the canula, which was immediately withdrawn and a seton introduced posteriorly to the trochanter major, and the use of anodynes and tonics with animal food directed. The seton was moved daily, and soon a profuse discharge took place, so exhausting to the strength of the patient, that it was thought advisable to remove it. The swelling around the joint greatly diminished ; the nocturnal pains, however, continued, and the pain in the knee. The leg becoming further drawn up so as to completely override the other. The limb continuing to become more and more flexed, it was determined, upon consultation, to divide the flexor muscles, and continue the operation upon the joints as should be found necessary upon a minute examination under chloroform. Drs. Mason, Whaley, and Peck, present. The patient was brought into a state of complete anesthesia, when it was found that the limb could be moved more freely than before the use of the seton, while the swelling had so much subsided as to no longer obscure the diagnosis, as the trochanter major and shaft of the former were much thickened, while the capsula of the joint was not distended. It was concluded that the former diagnosis was erroneous, and that, instead of morbus coxarius, it was a case of periostitis of the upper portion of the shaft and the trochanter major. The operation was, therefore, changed, and a simple incision made over the trochanter major through

the thickened periosteum down to the bone, and continued some two and a half inches down the shaft. The periosteum was found to be some one-eighth of an inch thick, and bony material thrown out around the trochanter major. The adductor tendons were then divided with slight extension of the limb. It has come down to the same length as the other. The discharge from the incision and the whole appearance of the case indicate a rapid recovery.

Retention of a portion of Placenta subsequent to Miscarriage.—Dr. Mason reported the following case:—Mrs. B., of the city, menstruated the last week in February, 1858, and was delivered of a fœtus on the 18th of June, following; about fourteen weeks after conception, reckoning from two weeks after the completion of the last monthly period. In my absence, my friend, Dr. Hutchison, saw her, and found that the fœtus and the ordinary amount of coagula had been expelled; but the cord which hung loosely in the vagina, came away on a *very slight* traction, *without the placenta;* and no portion of the placenta could be reached. The uterine contractions having almost ceased, Dr. H. directed the *infusion* of spurred rye, to be given in full doses. This had, however, little effect, except to *nauseate* the patient and to produce slight vomiting.

In this condition, I found Mrs. B. on the morning of the 19th. She had discontinued the ergot, and was comfortable, but *no placenta* had been seen by patient, or *nurse;* and on examination, none was discovered in the vagina or os uteri. The conclusions arrived at in conference with Dr. H., was that the after-birth must be still within the uterine cavity, and that the *tincture* of ergot, in full doses and at short intervals, should be *substituted* for the infusion. Several ounces were accordingly taken, within the next seventy-two hours, and although readily retained by the stomach, produced but little *specific* effect. The uterine discharge, however, gradually diminished. There were no sanious, purulent, or offensive evacuations; no fever; no constitutional irritation. The appetite and strength returned, and the general health after the expiration of two or three weeks improved.

This was to me a novel case, the only one of the kind which, in a somewhat extended obstetrical practice, I had seen. I have learned that since the occurrence of this case, a similar one had been observed by Dr. Hutchison, and reported to the Pathological Society of New York, and none of the members present had met with a similar occurrence. I have, moreover, from another source, been informed that Dr. Gardner, of New York, reported a case some years since, to one of the associations of that city, in which the placenta of one child was re-

tained until the birth of a second child, and then both placenta were expelled.

Since the above was written, I have found in the *Buffalo Medical Journal*, the following case reported to the Buffalo Medical Association, by Professor Rochester. "The patient was delivered "*twenty* days before, after a protracted and difficult labor. She "had suffered from diarrhœa for two or three days before her "confinement, and was afterwards attacked with dysentery, "which terminated fatally on September 6th. On post-mortem "examination, the uterus was found much larger than usual at "that time after delivery, and its cavity was occupied by a por- "tion of *adherent placenta* about three inches long by one inch "broad and one in thickness. *This was very closely adherent*, "and it required considerable force to break it away. There "was *no evidence* of *decomposition* in the mass. The observa- "tion seemed interesting as *showing the length of time a portion* "*of placenta could be retained without undergoing disintegration*" In this case the other portions of the placenta had been discharged spontaneously.

The patient was, however, directed to observe great care to avoid fatigue and exposure, and to apprise me at *once* should there occur any untoward change in her case. Nevertheless, finding herself gaining in health, she disregarded my injunctions, traveled to the country beyond Albany, and on her return engaged in active household duties, and walked at least once, to the lower part of the city from near Clinton avenue, a distance of one and a half to two miles. Soon after this, on the 5th October, she applied to me on account of the discharge from the vagina, which had again somewhat increased. She now informed me that it had *never wholly* ceased; at intervals, had been quite free, and nearly the whole time had been about as large in amount as was usual at her catamenial periods.

I now again prescribed for her, teaspoonful doses of *tr. ergot*, hoping to cause by its specific influence, the expulsion of whatever substance within the uterus might keep up the hemorrhage. In three or four days, sharp expulsive pains occurred, and continued for *two days;* when on the 11th October, a body about *one* inch and a quarter in length, and three-quarters of an inch in each of its other diameters, escaped from the vagina, *one hundred and fourteen* days after her miscarriage. This had the appearance of a *portion of placenta just separated from the uterus*, and when examined with the microscope, exhibited the *peculiar digital* structure of that body. This, then, was a portion of the placenta which had retained its connection with the walls of the uterus, and had acted as a foreign body so far as to keep up a constant hemorrhage.

MAY.—*Pneumonia and Pleuro-pneumonia prevalent.*—Dr. Brown had noticed an unusual number of cases of pneumonitis and pleuro-pneumonia, in some of which the *rusty sputa* was observed which he regards as a rare occurrence in Brooklyn. The experience of Drs. Cooke, Enos, Marvin, and Mitchell, coincide with that of Dr. Brown as to the unusual prevalence of inflammation of the lungs, and infrequency of that form which manifests itself by rusty sputa.

Sulphate of Iron in varicose veins.—Dr. Enos related the case of a man about 50 years of age, with ulcer and varicose veins of the leg. The veins were exceedingly tortuous and irregular, extending over the inner side of the leg, and upon the thigh. There was such an intricate mesh of veins, that the case did not seem a good one for treating with *pins*, and he thought to inject the veins with the perchloride of iron, as recommended by M. Pravay. Knowing the styptic properties of *persulphate of iron*, he tested the comparative powers of the perchloride, and of the persulphate on blood recently drawn, and found but little difference in the *time* necessary for coagulation, but the clot by the *persulphate* seemed more *firm* and *adhesive* than the other. It seemed, therefore, that the *persulphate* would answer better from its being less irritating, and producing a more permanent clot. He injected a few drops into a large vein on the inside of the knee, taking the precaution to make pressure, with a little compress, above the point of operation, until after the coagulum was formed. The clot formed promptly, but little irritation followed, and resulted in the obliteration of the vein. A few days after he injected a few drops in another place which had the effect of obliterating the vein almost entirely, and to such an extent, as to make any further operations unnecessary. There was but little irritation, and none of the glandular swelling sometimes seen after the injection of the perchloride of iron. So far as he is informed, this is the first time persulphate of iron has been used for this operation, and he thinks it will prove a better preparation than the other.

Ununited fracture treated by the drill.—Dr. Enos also related the case of a woman about 30 or 35 years of age, of intemperate habits, with ununited fracture of the bones of the leg. Both bones were broken in June last. There was no difficulty in coaptation, and the fracture was put up in the usual way. After a proper time, the splints were removed, and it was found that union had not taken place. Friction of the ends of the bones against each other, and the cold douche were used, needles were introduced, and a current of galvanism passed through them, but without effect. About a month ago, he bored through the ends of the fractured parts in several directions by means of a

drill, as recommended by Dr. Brainard, of Chicago. The patient was benefited by the first operation, which was repeated about two weeks afterwards, and it will probably suffice to effect a cure. Dr. Brainard was in the habit of repeating the operation every ten days. The failure to unite, was undoubtedly due to the bad constitution of the woman, induced by intemperance, and improper food.

Carbuncle.—Dr. Cooke reported two cases of carbuncle that were peculiar from their great size. One in an old man, of which the extent was seven inches long by five inches wide. Another was in an old lady, it was of a circular form, about six inches in diameter. In both cases the carbuncles are situated on the back, in one immediately beneath the scapula, and in the other still lower down. Both were treated with free crucial incisions, and with fair prospect of recovery.

Dry Gangrene.—He also reported a case of dry gangrene in a man 75 years old, commencing in the toe, and extending to the foot. It is unattended with pain or fever, and the only dressing was yeast poultice. There is no perceptible ossification of the artery.

Dislocation and fracture of humerus.—Dr. Johnson reported a case of dislocation of the humerus, and fracture of the surgical neck, which was first reduced and then the fractured parts put in position, and so treated as to result in a cure with little deformity, and but little restriction of the natural motions of the limb.

Amaurosis cured by the suppuration of the glands of the neck.—Dr. Isaacs reported the following case:—A. M., a tailor, æt. 45, of good constitution and temperate habits, consulted me about the first of January, 1859, on account of a partial amaurosis, which had existed for the last eighteen months. He said that he had been troubled during this period with muscæ volitantes, and occasionally flashes of light before the eyes, and photophobia, so that he could only see to work in a room somewhat darkened. There was much indistinctness of vision, and occasionally pain in the eye-ball, and back of the neck. Sometimes the pain was circumorbital. The appearance of the eyes was almost, or perhaps quite natural. He attributed his disease to working upon black cloth, very constantly, during the day, and also at night. *Treatment*—abstinence from his work, regulation of the bowels, pill. hydarg. cum opio, followed by iodide of potassium, and subsequently by quinine; a thread seton in each temple, and a blister to the back of the neck. Some weeks after, a seton was there inserted, which he wore about six weeks. Under this treatment he improved considerably, and in every respect. He now resumed his work. One day while sitting on a table, in a very warm room, between a large stove and the

door, this door was left partially open by some person, without his notice, and the side and back of his neck were exposed to a small, but strong current of cold air, for several minutes. On the next day he complained of pain, stiffness, and swelling, in the side and back of the neck. In forty-eight hours from the time of the accident, the lower cervical glands and surrounding tissues, above the right clavicle, were greatly swollen and enlarged, forming a tumor much larger than a goose egg. The integuments were distended, shining, and exceedingly painful upon the slightest touch. There was severe headache with fever, and very great constitutional irritation. The seton was instantly removed. In spite of leeches, anodyne applications, and general antiphlogistic treatment, profuse suppuration took place in about two weeks; and at the end of six weeks from the occurrence of the accident, the parts had apparently returned to their natural condition. *Since the occurrence of the suppuration, his eye sight has astonishingly improved.* His general health is also much better. He has again resumed his work, which he is now able to pursue with much satisfaction. The case is interesting, as showing the direct influence of cold upon a part, and the beneficial effect of severe counter irritation and suppuration, which resulted in consequence of its application.

Jarvis' Adjuster.—Dislocation of the os brachii.—Dr. Ball had very lately reduced two dislocations of the head of the humerus by Jarvis' Adjuster; both of which had existed for the period of one month, and in each instance several attempts at reduction had been made by all ordinary means without avail. One case occurred in a young man, and no difficulty was experienced after resorting to this instrument; the other, in an older man, aged about fifty years, where great force was requisite to tear up the attachments, but by placing a pad in the axilla for a fulcrum, power was gained, sufficient to overcome all resistance, and the bone was replaced. In each instance, the perfect use of the arm was regained. By the advantages afforded by this mechanical appliance, he had succeeded in affecting reduction in one case as late as six months after the accident.

Tartar Emetic in cerebral congestion during scarlet fever.—Dr. Chapman related a case of scarlet fever in a child ten years of age, in the which the eruption appeared faintly, like punctated points, without the bright efflorescence, and diffuse redness so characteristic of this exanthem. During the night of the third day, cerebral symptoms were developed; contracted pupil, intolerance of light, tinnitus illusions of sight, and hearing; great heat; maniacal delirium, etc. Antimony was prescribed without regard so much to quantity as effects. To insure its full action, it was ordered in divided portions every

fifteen minutes, until emesis followed, and afterwards this impression was continued, by as large doses given every hour as the stomach could be made to tolerate. In addition to this treatment, iced water was applied to the head continuously; the feet were put in mustard and warm water every three or four hours, and eight leeches were applied behind the ears on one occasion, and six on another. The contra stimulant, depleting treatment, was pursued in the same manner as it would have been in a head affection arising from other causes, and with the most happy results. He remarked, that whatever means we might select to relieve the congestion, in his opinion, the antimony was the most powerful and efficient agent; known to us, in combating and subduing congestion and inflammation of the brain in its inceptive stage. With the same views, he had employed it extensively in convulsions, infantile, hysterical, and puerperal, and in the stage of reaction following concussion of the brain. Its power was marked, and its effects more decisive than any other remedy.

Dr. Ball stated that he had for a long time used the antimony in the same cases, in the same doses, and in convulsions, etc., as represented by Dr. C., whose statements he confirmed by his experience.

Miliaria.—Dr. Heiser had recently seen four cases of miliaria, apparently idiopathic affections. Two of these were in one family. The fever was high; the pulse rapid, and the remissions and exacerbations frequent. German authority, of note, considers there is a rheumatic element present in the blood in such cases, and that the vesicular eruption is but a manifestation of this diathesis. In his native country, some two hundred years since, an epidemic of this disease prevailed extensively.

Golden Sulphuret of Antimony in pneumonia.—Dr. Simms stated that he had used this remedy with signal success in a case of consolidated lung remaining after pneumonia. The pneumonia in its active form, yielded readily to the ordinary remedies. Directly after empyema followed, which also was happily removed in a short period, but still a consolidation of the lung remained, that resisted the systematic use of antimony and calomel, both of which were continued for some time. He now made trial of the G. S. of antimony (gr. i.) with cannabis indica (grs. v) in powder. The lung under its use rapidly regained its functions; and this result was, in the doctor's opinion, greatly promoted, if not produced, by this medication.

Atelectasis Pulmonum.—Dr. Mitchell reported the following case.—On the 25th of October, 1858, I attended Mrs. ——— in confinement with her fourth child. The mother, though of feeble

constitution, was in good health, and the labor terminated naturally. The child cried gently, and was handed to the nurse, as "without deformity, and in all respects perfect."

During the next three days, my attention was directed more particularly to the mother, she being greatly exhausted by *post-partum* hemorrhage, and I knew little of the child, except that it appeared well, took its food freely, and was *very quiet*. I observed an unusual rapidity in its breathing, but not enough to excite apprehension, supposing that the complete development of the lung would soon be accomplished, as I had seen in several previous instances. At the end of a week, this symptom still continuing, the child was examined with more care. The respiration was about one hundred per minute. There was no cough, nor moaning, nor other evidence of pain in breathing. The respiratory act was short and superficial, *never* deep or long. The chest, like that of its father, was more than ordinarily full at its upper part, across the upper third of the sternum. The complexion of the whole surface was *very white* from its birth, contrasting with the red and mottled color of newly born children. Its muscular movements were not remarkably languid or feeble. It cried but little, and never noisily. It slept well; its food was taken readily and freely from a nursing bottle, and was well digested. The alvine evacuations were natural.

It continued slowly to increase in strength without losing flesh, but the frequency of the respirations became more and more obvious, and in the course of a month, was so marked, as to attract the notice of all who saw it.

During the following two weeks, the child, though apparently healthy, and nourished by a wet nurse, grew thin. The respiratory movements had increased in frequency, and were more labored, but seemed in no degree to interfere with his comfort, or diminish his playfulness. On viewing the exposed chest, the observer could not but be struck with the deep depressions formed in the neck, at each inspiration, about the insertion of the sterno mastoid muscle, especially that at the head of the sternum. Synchronous, with the inspiration, and caused by it, the lower ribs, instead of expanding, were seen to be contracted inwards, as were also the intercostal muscles, as if a large cupping glass were applied to the inner surface of the lower thoracic walls. A symptom that may be regarded as diagnostic.

On *percussion*, the upper half of the chest, both before and behind, was sonorous, but more so at the right than at the left. The lower half, posteriorly, was much less resonant, especially on the left side. The respiratory sounds were puerile in the

upper half, and feeble in the lower posterior regions; but throughout, more feeble on the left than on the right side, showing the superior lobes to be more developed than the inferior, and the right lung more than the left.

Dr. J. M. Smith saw the child in consultation, and after careful examination, confirmed the diagnosis previously made, of congenital atelectasis of the lung.

With no other treatment than attention to general health, the rapid breathing gradually diminished, until the number of respirations was less than sixty a minute.

The child is now five months old, and weighs fourteen pounds. The sonorousness of the chest is considerably increased, but there is still marked dullness in the posterior inferior regions. The respiratory sounds in the corresponding portions of the lungs are stronger than they were three months ago, but less distinct than natural. The chest presents anteriorly a perfect example of the "Pigeon breasted" form.

As to prognosis, it may be reasonably expected, that the lungs will eventually assume their normal expansion, and that the patient will attain his full health and physical development.

The history of atelectasis pulmonum is so brief, compared with the number of cases that have come under my own observation, that I am led to think that many pass unrecognized, and that some, at least, are fatally treated under a false diagnosis.

This condition is interesting, not only from its own nature, as interfering materially with the robust growth of the child, and sometimes in itself proving a cause of death, but as constituting an unfortunate complication in thoracic inflammations, and largely increasing the chances of a fatal termination.

Encephaloid Disease.—Dr. Enos reported the following case: —Mr. C.—Æt. 66.—was a prominent and well known gentleman of Brooklyn of polished manners and a well cultivated mind. His habit had been correct, and his general health good till within the last two years. In March, 1858, he began to complain of a dull pain in the left hip. It induced him to walk with a cane and favor the left limb a little. Appearing to be rheumatic the iodide of potassium was given. Soon after he had pain in the right shoulder and clavicle. In the latter part of April, 1858, while taking off his under shirt he snapped the right collar-bone at the juncture of the middle and outer third. I saw him two days after. The part was somewhat swollen and reddened and very painful. There was no deformity, the fractured ends being held together, probably by the unruptured periosteum. The lack of the usual deformity in this fracture and the inability to get crepitus, probably from effusion be-

tween the broken ends, and on account of the extreme tenderness of the inflamed periosteum, I did not at that time detect the fracture. Being ab ent from the country from May till November, I saw him next on the 22d of the latter month. He then had excruciating pain in the left thigh and leg—along the sciatic nerve. At the point where the fracture was in the clavicle there was developed a soft tumor fluctuating to the feel, about the size of a turkey's egg. His suffering was very great, especially at night, so that opiates had to be freely given. Sometimes the pain was allayed by cloths applied, saturated in chloroform liniment, or tinct. aconite and covered with oiled silk. He was obliged to sit in his chair night and day; any attempt to lie down aggravated the pain; his lower limbs became œdematous; the skin on his feet and legs ulcerated and burst and discharged serum freely; no pain in the shoulder; his appetite good and bowels regular; urine high colored, offensive and sometimes bloody. His uneasiness and suffering were so great that he had to be assisted almost constantly. He sat in his chair from October to April last. On the 26th of March while changing his position from one chair to another he broke his right thigh. The pain in it soon became so great that a person had to hold it steady night and day. There was no deformity, as he sat with his feet on the floor—the thigh was straight. It was so tender he would not let it be examined. On the 6th day after the injury the middle of the thigh was observed to sink down suggesting to the eye that the thigh was broken. The muscles too acted spasmodically as when irritated by broken bones. It became necessary therefore that the patient should be put in a horizontal position and the limb dressed. This was done under the influence of chloroform. The thigh was placed upon a double inclined plain, as union was not expected to take place, and this position was the most comfortable. There was no effort made to prevent shortening. The bed was very uncomfortable to him, and he begged pitiously for a week for chloroform, and it was given occasionally, but it made him so delirious that we desisted, and gave opium as before. McMunn's elixir, laudanum, and hoff. anodyne or pulv. Doveri—the pain in the broken thigh soon after it was dressed diminished, and almost ceased soon after, but he would frequently complain of the *left thigh*, and the corresponding *tuberosity* of the ischium. Bed sores formed and he had to be raised with great care, to have them dressed. While this was being done on the first of May the right humerus broke in the middle, this was dressed with an augular splint. The œdema in the lower limbs disappeared and they as well as the whole body became very much emaciated. He took but little food during

the few weeks of his life; he sank slowly, and died on the 18th inst.

Autopsy—The tumor in the shoulder occupied the place of the outer third of the clavicle, and proved to be a mass of encephaloid disease developed evidently in the bony tissue. The same disease was developed at the point of fracture, in the broken femur and also in the humerus. The lungs crepitated but scattered through them were little bodies, which on being opened were found to be cancerous. In the left kidney was a mass of soft cancer surmounting its upper part, as large as a small fist, with a large clot on its summit. In the right kidney were small uric acid calculi, some serous cysts on the surface. The seventh rib on the left side was broken near its cartilage, and an encephaloid mass as large as a turkey's egg occupied the place, and projecting into the cavity of the pleura. A small tumor the size of a hickory nut was developed in the head of the sternum, near the junction of the first rib. Pulsation in this tumor had been distinctly visible to the eye, and very perceptible to the touch. The tumor did not extend into the mediastinum, though the bone was perforated by it. An encephaloid mass as large as a double fist occupied the internal surface of the left iliac bone, which was also destroyed at this point. The sacrum was made ragged by the disease and communicated with the bed sore posteriorly.

JUNE.—*Intermittent Fever.*—According to the observation of all the members present this disease is much more common, and far less amenable to treatment than usual at this season of the year.

Some cases have occurred in parts of the city which have heretofore been exempt, but it has chiefly prevailed in the *vicinity of the excavations* for the *water pipes* and *sewers.* The largest proportion of cases occurring in the neighborhood of the deep excavations on DeKalb avenue, East of Washington Park.

Many of these cases are reported to be analogous to the masked intermittents or *dumb agues*, more common to Southern latitudes, and most of them resist the ordinary treatment by quinine for several weeks. In discussing the treatment of intermittents when the ordinary means fail, Dr. Cook states that he has usually succeeded by giving large doses of muriated tincture of iron, one dose of a fluid drachm just before the time of expected chill, and where this is irregular, the same quantity several times a day.

Dr. Dudley has also used the same remedy, but oftener the citrate of iron and quinine, with good success.

Dr. Johnson stated that Dr. Loins and Dr. Benj. Drake, were

in the habit of giving quinine and tartar emetic—sixteen grains of the former, to one grain of the latter dissolved in two ounces of water, of this a teaspoonful every hour up to the time of the expected chill, was a *certain* remedy.

Dr. Isaacs related a case of obstinate intermittent fever contracted in Florida. The chills were very long and very severe —pains in the limbs excruciating, with delirium. The patient was very feeble, and much prostrated by previous attacks— when he first saw him, the chill was expected to occur in half an hour, and from the history of the case, and appearance of the patient; there was great reason to fear that if this chill was not prevented, that he would probably die in it. As there was no time for the operation of the usual remedies, as soon as the symptoms of the approaching chill became evident, *tourniquets* were applied to the four extremities, so as to arrest the circulation in the brachial and femoral arteries, and alcoholic stimulants were administered. The chilly sensations were very slight, lasting only about ten minutes, and were then succeeded by heat of skin, followed by profuse perspiration, afterwards quinine was administered, with the other usual remedies, and the patient recovered.

Dr. Bell stated that in the "*fievre pernicieuse*" of the American tropics, where the congestive stages is highly dangerous and usually fatal on the second or third recurrence of the paroxysm, he had frequently cut it short on the eve of the chill by quinine and piperine in very large doses—a drachm of quinine and a scruple of piperine, given at one dose. But although he had frequently had his ingenuity taxed to the utmost in the treatment of these severe forms of intermittent, in various regions, he had generally found them curable—which was *not the case with some* of the *now prevailing intermittents of Brooklyn*. His experience had been like others in the severe forms of the ordinary type of this disease, viz., that when quinine failed, by combining arsenic or piperine it could be cured. But there were cases now in the Brooklyn City Hospital which had been repeatedly arsenicated, yet in less than a week the paroxysm would recur, and most of them would run three weeks, no matter what the treatment, while others would last twice as long. In several of these cases, he had used tartar emtic to free emesis, and as a nauseant in combination with opiates, but to little purpose. The disease would be relieved only for a day or two, while the treatment which relieved it was more intolerable than the disease. Oil of turpentine, with which he had sometimes been successful after the failure of quinine, had also been tried without benefit. He was glad to know that there was a cure in the use of *drachm*

doses of *muriated tincture of iron*, which he had never given in such large doses, but he would lose no time in giving it a trial. He found, however, that notwithstanding the cases could not be *cut short* by quinine, they were nevertheless *influenced* by it, the cases in which it was used, being milder than those where it was omitted.

Dislocation of Cuboid bone of left ankle.—Dr. Bell stated that this accident occurred to a married lady of relaxed fibre, who had been in bad health for several years. Engaged in moving, in the latter part of April, she was carrying some light article of furniture from the doorsteps to the cart, when she caught the outer side of the foot against the projecting edge of a flagstone, and so stumbled as to bring the weight of her body on the outer or upper side of the foot. The pain was so great as to cause immediate fainting. It occurred in the evening, and I did not see her until 9½ o'clock next morning. She had suffered much pain in the injured part, and had slept but little. The foot and ankle were much swollen, with a distinct prominence of that portion corresponding with the inner edge of the cuboid bone in its normal state. The articulating surface of the 5th metatarsal bone was carried up with the cuboid, leaving a distinct hollow under the place of its normal position, and giving the foot a twisted appearance downwards and inwards.

The injured part was exceedingly painful on the slightest touch, and once during the night, from attempted rubbing, it being deemed a sprain, she fainted—as on first receiving injury.

My examination was chiefly made while she was under the influence of chloroform, by means of which I was enabled to reduce it. To effect reduction, I forcibly bent the foot in the line of deformity, at the same time pressing hard with the palm of the hand on the protuberance—an assistant holding the leg. The bone slipt in its place with a distinct chuck, which could be heard at the distance of several feet.

Applied no dressing; ordered rest for a few days, and at the end of two weeks the lady was attending to her household duties without limping.

ART. III.—*The Operation of Turning by External Manipulations, Considered from a Historical and Practical Point of View. With Cases.* By E. NOEGGERATH, M.D.

Introductory.—Having recently had my attention called to the practice of turning the fœtus by external manipulation, I propose to give a historical and practical sketch of this operation. I think it important to call anew the attention of American prac-

titioners to this operation, which is, I believe, too little thought of, and too little practiced, or perhaps not sufficiently appreciated in this country. The reasons for this neglect are many. The handbooks of obstetric science, which are consulted by our practioners belong to the English school, and among these Ramsbotham's work enjoys the greatest confidence. Most of these text books, and particularly the latter, seem to attach very little importance to this operation. Ramsbotham even goes so far as to deny the practicability of its performance, because he does not believe that the position of the fœtus in utero could be made out by external examination alone. This opinion has been endorsed by many of the leading physicians in the United States. The question as to the comparative value of external and internal examination of pregnant women for the purpose of arriving at a knowledge of the position of the fœtus has been discussed frequently by the best authors on obstetric medicine, and we may well divide the history of this practice into two periods, viz., that before and that after the application of ausculation to the diagnosis of pregnancy.

Before this time opinions were somewhat divided, but the majority relied upon internal examination. Still even at this time two of the greatest German accoucheurs, Wigand and W. Schmidt undertook with the happiest success to point out the vast importance of external examination. The latter even went so far as to declare that "it was often of much greater value than internal examination." (See W. Schmidt, *Sammlung zweifelhafter Schwangerschafts fälle—a collection of cases of doubtful pregnancy*, Wien, 1818.)

But when Dr. Mayor of Geneva, and Dr. Lejumeau de Kergaradec (1821) first demonstrated the possibility of perceiving the sounds of the fœtal heart and the placental souffle, when Paul Dubois, Laennec, Kennedy, Naegele, Hohl, Depaul, and many others, had not only confirmed their observations but even turned them to practical account, the value of external examination for the purpose of detecting the position of the fœtus was established for all time to come. And now a-days all reliable authors (Wigand, Nægele, Kilian, Hohl, Depaul, etc. etc.,) who have a chapter on this point agree as to the possibility of making out the position of the fœtus by this means alone in the greater number of cases. From my own, not very limited experience, I must freely confess that if I should be asked to make a diagnosis in a case of transverse presentation, at beginning of labor by one method only with the exclusion of the other, I would rather dispense entirely with the internal than with the external examination. This is true of the great majority of cases, while in some few instances the

thickness of the abdominal walls, or the tenderness of the womb, or the undue mobility of the fœtus exclude the chances of a satisfactory external examination.

But the conviction of being able to recognize the presentation of the fœtus in this way, could not be a sufficient inducement to engage obstetricians to change the position of the fœtus by external examination. It was another proceeding executed by nature without the interference of accoucheurs, that induced them to change the position of the fœtus from its orignal situation. The history of *spontaneous version* from the earliest periods to this day records numerous observations which show that before or even during labor the fœtus may spontaneously change its former position and present with the head or the breech.

The first case of spontaneous version is recorded in the Holy Bible, Genesis Chapter 38, v. 28. The arm which first presented in the delivery of Tamar, belonged to Zarah, who was born after Pharez, in a common head-presentation, the arm following after the birth of the head in the usual way after it had reëntered the uterine cavity. From that time up to the present day we are in possession of numerous accounts of the occurrence of this interesting phenomenon, among which those recorded by Denman, Douglas, Gooch, Burns, give the most satisfactory explanation of the fact, and now-a-days we rarely meet with an obstetric hospital report where its occurrence is not mentioned. Thus Dr. C. Braun of Vienna (see his *klinik der Geburtshilfe*, etc., Erlangen, 1855) states that it happened 19 times during the last three months of gestation and twice at the beginning of labor in a number of 7,835 births occurring in one year.

It was the combination of these two circumstances, viz., the established fact of spontaneous version, and the perfection of external diagnosis which induced accoucheurs to try turning by external manipulation and bring this operation to a scientific standing.

History of the operation.—Although the medical system of our days is based in its larger outlines upon the doctrines of Hippocrates, that portion of our science which belongs to obstetrics has somewhat emancipated itself from the rules laid down by its master, and although we shall show that turning by external manipulation was proposed by Hippocrates, we may add that our proceeding is so entirely different from that in use by our common master as to leave little in common but the name. In *De Mulierum morbis*, Lib. I. cap. xciii. 9, Hippocrates has the following words : "Lectum altum, robustum ac instratum sumito, et mulierem supinam reclinato, etc. Elevent autem

duo viri ex utroque pede, hinc atque illinc, quo indirectum lectus cadat, plane ac aequaliter, et convulsio ne fiat. Concutiendum est autem maxime una cum partus dolore, et si quidem discedant, statim quiescendum. Sin minus interstitio facto rursus concutito." These directions are for the management of a woman who is in labor with a child in a wrong position. He recommends to shake the woman during every pain, she being placed in a recumbent position with head undermost. In this way the presenting part of the fœtus is intended to fall backwards, thus making room for the head. Although this method was not used to the exclusion of others, it was extensively practised by Greek physicians at that time, and strange to say the same manœuvre is even now employed among the lower classes of midwives in our neighboring State of Mexico. A more rational not to say scientific way of treating malposition of the fœtus is followed at this day by the accoucheurs of Japan, they are in possession of several external manipulations, called *Sei-tai*, *Ambak* and *Auma*, by which the child is turned in utero, and as it seems successfully, because they very seldom have to resort to the introduction of the hand into the uterus. But more enlightened ages could not be satisfied with such rude proceedings; Celsus already conveyed unmistakeable rules as to the management of cross positions by direct manipulations. All traces of external manipulation were, however, lost in the Arab school, and it was not until 1654 when a German accoucheur, Jacobus Rueff, a pupil of Eucharius Roesslin, called anew the attention of the profession to a proceeding which was entirely forgotten. (See : *De conceptu et generatione hominis et usquae circa haec potissimum consideratur.* Libri sex congesti opera T. Rueff chirurgi *Figurini.*) But as the other doctrines of this obstetrician were in many points absurd, and as soon after wards the French school, headed by Mauriceau and Delamotte, took the lead all over Europe, Jacob Rueff and his few adherents were scarcely thought worthy of notice. Equally unsuccessful were the attempts of a Roman physician, Signor Scipion Mercurio, to regain the lost ground in 1642.* During the following centuries not one of the obstetric authorities thought it worth while to pay even a passing tribute to this operation.

At length a man stepped forward, and strongly recommended the turning of the child by external manipulation in 1812. It was the great German accoucheur and physician, Dr. Justus H. Wigand, of Hamburg, who published a pamphlet, addressed to the Medical Faculties of Paris and Vienna, in which he gave a

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* *La commare o raccoglitrice dell' Eccellentissimo Signor Scipion Mercurio, Filosofo Medico e Cittadino Romano, etc., etc.* Verona, 1642.

report of several cases in which he had performed, and successfully so, this operation. (See: *Von einer neuen und leichten Methode zu wenden etc., in Ej. Drei den medicin. Facultäten zu Paris und Berlin übergebenen geburtshülflichen Abhandlungen*, Hamburg, 1812, 4. p. 35.) Although Dr. Wigand's classical description of the birth of man was only published eight years afterwards, he already enjoyed such a general confidence, that everything which proceeded from his pen, was received with eagerness by the profession. No wonder, then, that turning by external manipulation became now the password; the more so, because it was just the time, when a reaction against the mania of too active interference, was most desirable. The great gift of Wigand, was the power of unprejudiced and available observation, and so it could not eschew his attentive eyes, that nature effected a rectification of a wrong position, by a so-called spontaneous version. This gave him the first idea of his method of turning, as he professes himself, in the article mentioned above. The rules which he taught to follow were so perfect, that soon afterwards a number of successful performances of this operation were reported by other physicians, and, even the *modus operandi* of our time, is just the same as that recommended by its inventor. The first men who directed their attention more especially to Wigand's operations, were Professors Joerg,* Busch,† Naegele,‡ Kilian,§ and many others. All the leading men in Germany pronounced in favor of the new proceeding, and, if anything was left unfinished by Wigand, be it with regard to indications, time of performance, or manipulations, this was completed by his many successors. Not one voice was heard against it. Among the many monographs which appeared at that time, the pamphlet of Professor Martin (*Beitrage zur Gynaekologie*, 2 Heft. p. 3 sequ, über die äussere Wendung der Frucht im Mutterleibe) and of Professor Ritgen (*Das gewaltlose Wenden auf den Kopf oder Steiss nach Wiegand.* In Ej. Anzeigen der mechan, Hülfen, etc., Giessen, 1820). The questions discussed by these several authors, considered the manner in which these manipulations effected a change in the presentation of the child, the different ways they might be most successfully performed, and the most suitable time.

With regard to the first point, we will mention Dr. Joerg's,

* Joerg, J. Chr. G., *Schriften zur Beförderung der Kenntniss des menschlichen Weibes, etc.* Leipzig, 1831.

† Busch, W. H., *Handbuch der Geburtskunde in alphabetischer Ordnung.* Berlin, 1836.

‡ Naegele, F. K., *Lehrbuch der Geburtshülfe.* Heidelberg, 1836. 3d ed.

§ Kilian, H. F., *Die operative Geburtshülfe.* 2d ed. Bonn, 1849.

Busch's, and Kilian's opinion, all of whom, lay great stress on the dynamic effects of this pressing and kneading of the uterus in several places, attributing only a secondary importance to the direct mechanical displacement imparted to the fœtus. The manœuvre itself, and the most convenient time of its performance, will be discussed hereafter.

All the later German authors which we have consulted, pronounce an equally favorable opinion as those of former times. There is not one among them, who has not dedicated a full chapter on turning by external manipulations in his hand-book, highly approving of this operation. The works to which we refer, and which we have subjected to a personal examination, are those of Scanzoni,* Rosshirt,† Hohl,‡ Kilian,§ Lumpe,‖ Braun,¶ Arneth.** All of them seem to have had personal experience in the performance of this operation. Dr. Braun reports two successful cases. Dr. Lumpe's opinion of this operation is so elated, that he considers its happy performance as a sign of the highest obstetric education and skill. Dr. Arneth asserts that he had changed a cross presentation into a vertex presentation on several occasions. Dr. Scanzoni speaks of the possibility of its successful performance, with a confidence, which shows, that his views are not derived from foreign experience alone, but, above all, it is our gifted master, Professor Kilian, who, with his wonted eloquence, has done more for the final establishment of this operation, than most of his cotemporaries. Finally, we may mention a very able article on this subject, written by Professor Breit, of Tubingen (See Ej. *Geburtshülfliche Abhandlungen in Roser's und Wunderlich's Archiv.* vii. 6–8., 1848). This is a very valuable thesis, containing many practical hints upon the subject. According to his own experience, it is in many cases sufficient to repeat the pressing and squeezing of the uterus only two or three times, to

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* *Lehrbuch der Geburtshilfe*, von Dr. F. W. Scanzoni, etc. 3d ed. Wien: L. W. Seidel, 1855. Pp. 740–741.

† *Lehrbuch der Geburtshilfe*, von Dr. J. E. Rosshirt, Professor der Geburtshilfe an der Universität zu Erlangen, etc. Erlangen: Heyder & Zimmer, 1851. Pp. 565–569.

‡ *Lehrbuch der Geburtshilfe, etc.*, von Dr. A. F. Hohl, Professor der Geburtshilfe zu Halle. Leipzig: W. Engelmann, 1855. Pp. 720–722.

§ *Die Geburtslehre von Seiten der Wissenschaft und Kunst, etc.* Von Dr. H. F. Kilian. 2d ed. Frankfurt a. M.: F. Varrentrap. Pp. 164–165.

‖ *Cursus der praktischen Geburtshilfe, etc.* Von Dr. E. Lumpe, emeriter Assistent an der Wiener Geburtshilflichen Klinik. Wien: Braumüller & Seidel, 1843. Page 74 sequ.

¶ *Klinik der Geburtshilfe und Gynaekologie.* Von Dr. J. Chiari, Dr. C. Braun und Dr. J. Spaeth. Erlangen: F. Enke, 1855. Pp. 50 and 55.

** *Die geburtshilfliche Praxis etc.* Von Dr. F. W. Arneth. Wien: W. Braumüller, 1851. Pp. 69–70.

engage the head in the pelvic entrance, when the child occupied, at first, a transverse or oblique position. But to perform this successfully, considerable skill in external examination is the *conditio sine qua non.*

While thus the German literature abounds with treatises commendatory of turning by external manipulation, we find a deplorable scarcity on the subject among English and American authors; and this is no doubt the principal reason, why this operation is so very little practised on this continent. All that Ramsbotham* has to say about it, is contained in the following words: "It is natural to suppose, that this process (spontaneous version) may be assisted by external manipulation. Thus, Wigand has stated, that it is possible, before the waters have escaped, to change the position of the head, or even the presentations by external, abdominal manipulations." One of the few British authors who allude to it, is the distinguished professor of Glasgow, Dr. J. Burns.† Still he only seems to consider it as an interesting historical fact, and on page 384, he mentions a case, where this operation has been successfully performed by Mr. Buchanan, of Hull. Drs. Churchill, Rigby, and Tyler Smith, have each a very short notice on the subject; neither in the second edition of Meigs' book on Obstetrics, nor in King's or Miller's treatises the subject is mentioned. The latter gentleman even denies the propriety of cephalic version by internal manipulations. A somewhat different impression is obtained, by a review of the French authors, and more particularly, of those of the modern school. Of those older writers, Mauriceau, De la Motte, and Levret, we cannot expect anything but the most active surgical interference, it was a tribute which they paid to the spirit of their time. But Velpeau‡ is already acquainted with Wigand's plan, and after having it duly recorded, he goes on to say: "Before I was acquainted with the doctrine of the German professor, I had already followed this precept, and have, in conforming to it, found, that it is in fact, sometimes possible, to restore to the vertex, its natural position, etc." Jacquemier§ does briefly mention Wigand's plan, and seems to have confidence in the feasibility of its performance, while he has no personal experience on the value of this opera-

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* *The Principles and Practice of Obstetric Medicine and Surgery.* By F. H. Ramsbotham. With Notes and Additions by W. V. Keating, M.D. Philadelphia: Blanchard & Lea, 1859. Page 360.

† *The Principles of Midwifery.* By J. Burns, M.D., etc. 8th edit. London: Longman, Rees. 1832.

‡ *An elementary Treatise on Midwifery, or Principles of Tokology and Embryology.* By C. Velpeau. Translated by C. Meigs, etc. Philadelphia: Lindsay & Blakiston. 3d Amer. edit. 1854. Page 431.

§ *Manuel des Accouchement etc.* Par J. Jaquemier. Paris, 1846. Page 100.

tion. A great deal more complete are the notes of Cazeaux.* After giving a description of the signs by which the presentation of the fœtus may be recognized, even before beginning labor, he says: "Alors pour peu que le fœtus soit mobile dans la cavité amniotique, il est très possible de ramener la tête au détroit supérieur. Il suffi pour cela, après avoir corrigé l'obliquité utérine, si elle se rencontre, de relever avec une main le côté de l'utérus auquel correspond le siége de l'enfant, et de repousser avec l'autre main la tête dans la direction du detroit superieur. Des manipulations extérieures sagement dirigées ont suffi assez souvent pour convertir la position du tronc, etc."

The most important pamphlet, not among the French authors alone, but a pamphlet only secondary in importance to the original one, of Wigand, is the article published by Dr. A. Mattei, in the Gazette de Paris, of 1855, and, in his work, *Essai sur l'accouchement physiologique*, Paris: Victor Mason, 1855; page 179, sequ., on "*reduction cephalique and version cephalique.*" The first name he applies to the ordinary operation, generally called by most authors, cephalic version, by which the head, which is located near the pelvic entrance, as it is, for instance, in shoulder presentations, may be brought down to form a regular vertex presentation. Cephalic version means, according to Dr. Mattei's explanation, the operation by which, in breech presentations, the nates are removed from the place they formerly occupied, while the head is brought down to occupy a position above the pelvic brim, the child thus being turned entirely around its horizontal axis. "The cause," he remarks, "why cephalic reduction has been so very seldom performed by obstetricians may be found in the difficulty of detecting the presentations, before the rupture of the membranes, and this difficulty, we ourselves, had at first to overcome. The abdominal palpation, which enabled us to recognize all presentations and positions of the fœtus during pregnancy and at beginning of labor, makes the diagnosis and the reduction so easy before the rupture of the membranes, that we happened to feel the head in the iliac fossa, and that the very manipulations, for the purpose of examining, were sufficient to remove the head towards the pelvic entrance. *As long as labor has not begun, it is very easy to advance the head towards the brim of the pelvis*, by a simple pressure of the hand upon the cephalic protuberance." In this

* *Traité theoretique et pratique de l'art des accouchements, etc.* Par P. Cazeaux, Professeur à la Faculté de médicine de Paris, etc. 1st edit. Paris: F. Chamerot, 1853. Page 839.

way, Dr. Mattei goes on to describe the manœuvre by which he performs cephalic reduction, and which is essentially the same as that recommended by the authors named above. His "version cephalique," is a step forwards. It is a change of a breech presentation into that of the vertex by external manipulation. The author does not recognize a breech presentation as a physiological condition, and he, therefore, proposes to change all of them into head presentations, leaving it undecided whether it ought to be done in cases of contracted pelvis. The most suitable time for the performance of this operation, is from the sixth up to the middle of the ninth month of gestation. At any rate, the nates must not yet be engaged in the pelvic entrance. For performing the operation, the woman is placed horizontally on her back, her pelvis being placed on a cushion, so as to have it elevated somewhat above the level of the abdomen. The first part of the operation consists of removing the pelvis of the child from the upper straight. For this purpose, the cubital border of one or both hands must be placed between the edge of the os pubis and the presenting part of the fœtus. This being done, the nates are gently pushed upwards, and, in a direction somewhat opposite to that of the head. While the next manœuvre is performed, the fœtal trunc must be maintained in the position thus acquired. By the third act of the operation, the head is pressed downwards, until it reaches the pelvic brim. In performing this latter manipulation, the operator has to take care to press the head downwards in the sense of the flexion of the fœtal trunc. The fœtus thus turned, must be retained for some time in this new position, in order to get the extremities, and the entire body to become thus nicely encased in the uterine cavity. After the version has thus been carefully performed, the fœtus seldom retakes its former position. If this accident should happen, however, the fœtus must be turned anew, and retained by an abdominal bandage, and if even this, should not secure the desired position, the operation must be delayed until labor has begun, in order to fix the head, by rupturing the membranes. In an appendix, Dr. Mattei reports several cases in which cephalic version had been successfully performed. One of the cases described is the following:

Magdaline Calombani, a native of Taglio (Tavagne), rather small of stature, of a pretty good constitution. She does not recollect the time when she menstruated first, but says that she had always her courses regular, and lasting from eight to ten days. She is now twenty-eight years of age and has given birth to one child. In the month of November, 1853, she was unwell for the last time. During this pregnancy she has been

somewhat troubled by nausea, but felt perfectly well in every other way.

On July 18th she was examined in the hospital. *Palpation.*—In the upright posture the abdomen is well rounded and elevated, the fundus being perceptible in a distance of three fingers above the umbilicus. One feels that the fœtal mass occupies the lowest section of the abdomen, but the presentation cannot be well distinguished. The woman being placed in a recumbent position, one feels a little to the right and above the umbilicus a superficial, rounded tumor; lower down and approaching the mesian line, another tumor is felt equally superficial, fixed upon a larger and deeper tumor. All these fœtal protuberances are so moveable that it is difficult to explore them. It was therefore necessary to have the fœtus laterally fixed by an assistant. During the exploration the right superior tumor was found to be the head; this we calculated therefore to be a trunk-presentation, head to the right: the tumors below and towards the left representing the feet. The woman asserts that the quickening is most often perceived below the umbilicus, and more to the right than to the left side. By the internal examination no portion of the fœtus can be detected; the neck is smooth, open, and allows the finger to enter up to the internal orifice, which is closed. Another examination, on August 16th, gives the following results: *Palpation.*—The abdomen is very much enlarged, with a great quantity of liquor amnii; the fœtal mass is principally located in the right segment of the uterus. Above and to the right of the linea alba, a round, superficial tumor is felt, which can be only the head. The rest of the fœtal tumor occupies a downward direction towards the mesian line. The upper strait offers neither a hard tumor (head), nor a soft one (pelvis).

Auscultation.—The placentar souffle very strong in the left iliac fossa and the fœtal sounds can be best perceived along a line running from right to left and from above downwards, passing through the mesian line in an oblique direction. They suddenly escape perception in continuing auscultation towards the left side and going upwards, and are utterly imperceptible on the rounded tumor, which seems to be the head.

Internal examination.—Nothing perceived in the upper strait; the os soft perfectly dilatable up to the inner orifice. Thus being perfectly aware of the position of the child, we placed the woman on her back, the lower part of which was elevated by a pillow, in order to perform the operation of turning.

Version.—After having taken our position on the right side of the woman we pushed the head of the fœtus backwards and downwards, while we elevated its trunk by the left hand, and

in the same instant we perceived that the child turned; the version was performed in a few seconds. We were satisfied that this was the case, because the flanks were now empty, the fœtal tumor in a direction with the linea alba, and the head was felt distinctly through the abdominal walls, presenting in the upper strait, and also by an examination through the vagina a hard, round tumor was now easily perceptible above the pelvic entrance.

On the 17th and 18th the head is found down; the legs of the woman begin to swell. The 19th, vague pains in the abdomen are perceived.

On the 20th, after the woman had left the hospital for a short time to go on an errand in the city, she returned to her ward at the time of the physician's visit, and complained of diarrhœa and pains in her bowels; she had at the same time frequent calls to pass water and a sensation of bearing down. *Palpation.*—We found that the fœtus was displaced; the head is on the left of the linea alba and high above; one feels the pointed circumference of the left shoulder near the mesian line; the rest of the trunk not quite distinctly felt, it seems to make a curve, its concavity being turned upwards and towards the right side. In examining the upper strait the head is not felt any more.

Auscultation.—The head moves with every beating of the aorta; the maximum of the fœtal pulsation is below the place where the shoulder can be distinguished; the placental souffle is perceived in both iliac fossæ, and mostly on the right side.

Second version.—It is performed in a few seconds, just as easy as on the former occasion. Its success was verified by the palpation of the head in the upper strait. The woman was simply confined to a recumbent position without a pillow under her back. On the 24th the head is always perceptible at the upper strait by external as well as internal examination. It now could be ascertained by palpation that the trunk was turned towards the right, and the hollow part of the fœtal arch towards the left.

In the night of the 30th, labor commenced and advanced slowly. During an examination on the following day, it was ascertained that the head presented; the ictus of the fœtal heart are strongest on the right side below the umbilicus. During the following days labor advanced hardly any until September 4th, when the os began to dilate gradually and steadily. At that time the small fonticulus was found to be directed toward the right iliac bone. By introducing two fingers along the head of the child, it was tried to turn the occiput towards the os pubis. This was only partially effected, as the occiput

always moved backwards as soon as the pain began to slacken. The pains were so insufficient that the head did not advance fast enough to allow labor to go on without interference. Therefore the forceps was applied, which, however, at first could not be locked. Still, when the head began to advance, the forceps was well adjusted and a living child extracted. The mother left the hospital on the 12th September, perfectly healthy.

This is one of the cases selected at random from a considerable number of similar ones, most minutely reported by Dr. Mattei. All of them are unusually interesting, fully demonstrating the possibility of an exact diagnosis of the child's presentation by external examination alone, and of cephalic version by external manipulation.

In searching the literature of the last few years, we have met with several cases published in periodicals by authors, not yet named in this article. Dr. Joseph Elliot, accoucheur at the children's institute of Stockholm, published two cases in the *Tidskrift for Läkare*, Br. VII., No. 7 of 1847.

Case 1.—On July 28th, 1837, he was called at about six o'clock, P. M., to a primipara 22 years of age, to perform the operation of turning, because the midwife attending the case, was unable to do it on account of rheumatism. On examination Dr. Elliot found the os uteri dilated to a diameter of one inch and a half, the membranes unruptured and an arm presenting, and the other presenting portions could not be distinctly made out, as the abdominal parietes were very thin. A cross position of the fœtus could be recognized by external examination, and the head could be distinguished as a round, hard mass in the left iliac region. The woman had been taken with the first labor pains on July 26th, the pelvis was somewhat contracted and the pains very insufficient, so that a prompt dilatation of the os was very unlikely to be expected, the author, therefore, resolved to try Wigand's method. He tried by gentle friction to push the head upwards, and really the head began to move. Dr. Elliot therefore continued this manipulation, trying to push the head upwards with his right hand, and to bring the feet downwards with his left. This was done at the time when the pains ceased, while during their action he tried to keep the fœtus in the position which it had acquired. This manœuver having been performed for about twenty minutes, the fœtal mass had acquired an erect position, and to the great satisfaction of the doctor, the feet instead of the arm could be felt by internal examination. The great toes were directed backwards, and the feet moved lively when they were touched; during all this time the patient kept her recumbent position. At nine

o'clock, A. M., on the following day, the os was sufficiently dilated to allow the extraction of the fœtus, which was done without delay. The child was of the female sex, and stillborn, but soon resuscitated in the usual way, the after-birth was easily removed, and the woman did well up to the fifth day of her childbed, when she was taken with typhus fever, occasioned as it seemed by mental emotion, from which she died on the ninth day.

Case 2.—On November 8th, 1837, Dr. Elliot was called to see a primipara 24 years of age. He found a cross presentation of the child in the mesogastric region, while the hypogastric region seemed to be empty, the amniotic bag presented in a large extent, but was empty, and no portion of the fœtus could be detected by internal examination. The pelvis was of natural configuration, and the pains were strong. From all these symptoms Dr. Elliot considered this to be a case of cross-presentation, and he resolved not to perform the operation of turning until he would be able to feel a portion of the fœtus. An hour later nothing was changed, and the author thought it a good plan to try the manœuvre as detailed in the foregoing case, viz., to push the fœtus upwards, leaving it to chance whether the head or the nates would come downwards, as it was impossible to make out the situation of the several parts of the fœtus. These manipulations were performed for fifteen minutes, and now the head of the fœtus could be felt presenting through the os uteri, but it was directed somewhat towards the right side, accordingly the woman was ordered to lie on her left side, and the above named manipulations continued for another hour. At ten o'clock, P. M., the child was born without the least trouble. Both mother and child did well.

Case 3.—In 1854, Dr. Spengler of Berlin, reported a case published in the *Monatsschrift für Geburtshlüfe.* (Bd. iii, p. 184.) When the woman, a primipara, was taken with the first labor pains, it was ascertained by examination through the vagina that the shoulder presented, and on further (external) examination the head was found towards the left iliac region, and the nates higher up towards the right side. The woman being placed on her left side a cushion was placed underneath that part, where the head could be recognized through the abdominal parietes. The os was dilated to the size of a quarter (Viergroschenstück), the water discharged. Gentle frictions were administered on the place which corresponded with the pelvic extremity of the fœtus, after a few hours the nates had removed nearer towards the mesian line, while the head remained in its former position, still it appeared to be more moveable than it had been

before. Now both hands were stretched, and rested upon both head and nates of the fœtus, with a tendency to lower the position of the former and to elevate the latter. From time to time gentle frictions were performed upon the head and pelvis in the same direction. Although the pains were not very strong, the head began to move gradually away from the iliac bone, and approached the os uteri, so that at last the head presented in full size, while the shoulder could no more be felt through the laquear vaginæ. After a few pains the head was engaged in the pelvic entrance, and the woman was placed on her back, and at six o'clock in the evening a male child was born.

Case 4.—The following case is from Professor Grenser's report of the Dresden Lying-in Hospital (see *Monatsschrift f. Geburtsk.*, September, 1857). A strong well-built woman, æt. 32, who had borne three children happily, was brought in, in labor, on September the 7th. The abdomen appeared stretched more in the transverse direction. The os uteri was very little opened, and the right elbow of the child presented. Through the thin abdominal and uterine walls the head was distinctly felt in the left iliac fossa, the breech opposite in the right side of the uterus. The woman lying on her back, it was then attempted in the intervals of the pains to push the head downwards, and the back upwards, whilst in the acme of the pains the uterus was merely compressed on either side. These manipulations were continued for half an hour, then the patient was made to lie on the left side, and in the place where the head was felt a hard pillow was pressed. On examination the elbow was no longer felt, neither could any other part. In the mean time the os uteri had expanded somewhat. The patient was kept in the same position, and at six P. M. the head was felt by ballotement in the brim. At noon next day the os had fully opened, the liquor amnii escaped, and in one hour and three quarters a living child weighing eight pounds, was born in the first cranial position. The mother did well.

Case 5.—The operation of turning by external manipulation, of the latest date, and published for the first time on this occasion, is that of our distinguished friend Dr. Shnetter of this city, who kindly informed us of the history of the case. The operation was performed on September 22d, 1859. On that day the doctor was called to see Mrs. Johanna H———, 26 years of age, residing at 502 Houston street. She is a healthy multipara, of medium size. Four years ago she fell in labor with her first child, which presented in a cross situation. The physician who attended her on that occasion turned the child by the feet, and extracted it up to the head, which he was

unable to deliver. Therefore Dr. Shnetter was called in and delivered the woman of a dead child. When Mrs. H. went through her second confinement, the vertex presented and all went on as favorably as could be desired. On the above named day Dr. Shnetter saw Mrs. H. for the first time at about eight o'clock, A. M. On external examination the head in the shape of a round, hard mass could be felt distinctly through the abdominal walls, in the left iliac fossa, and the woman declared that the quickening was most distinctly felt towards the right side, somewhat above the umbilicus. By internal examination it was found that the os was dilated to about an inch in diameter, and that the amniotic bag presented in the form of a flaccid oblong sac, while no fœtal part could be detected. Upon this four fingers were introduced into the vagina, and now it was easy to detect the left shoulder downmost, back forwards. The pains appeared to be pretty strong. The woman was now placed on her left side, and the doctor tried by pressing upon the head to move it downwards, towards the pelvic entrance, while with the other hand he pushed the trunk towards the mesian line. Readily the head moved away, and at the same time the woman told the doctor that she had the sensation as if the child had turned inside of her. Upon internal examination performed immediately afterwards, it was found that the amniotic bag had somewhat changed its disposition, it having moved upwards while its form was of more spherical shape, with considerably larger lateral diameters. At the same time the head could be felt distinctly in the upper strait. The doctor now left Mrs. H. and advised her to keep the position on the left side. Half an hour later when Dr. Shnetter saw her again, the head had returned to its former position. He therefore performed the same manœuvre as detailed above, but in order to make sure of the head now, the membranes were ruptured. After this was done a portion of the funis escaped from the womb; this was brought back, and the woman placed *à la vache*, as proposed by Doctor Thomas. The woman kept this position for about a quarter of an hour, and although she had several good pains, during this time the funis never protruded any more. She therefore was placed on her left side again, and a pillow placed underneath the left iliac fossa. At twelve o'clock the os was pretty well dilated, but although the pains seemed to be sufficiently strong, the head did not advance, it being pressed against the upper edge of the symphysis pubis, in consequence of the pelvis having an unusually strong inclination. Therefore the forceps was applied and a full grown child was delivered in the most desirable state of life.

Case 6.—Lastly, I will mention that I have performed this

operation myself in 1854, in a woman who had been delivered twice before of full grown dead children, by version and extraction by the feet. The other features in the case were so much like those detailed in the case last mentioned, with the exception of the prolapse of the funis, that it would be only a repetition, were I to give a history in detail, from which I refrain; the more so, because I had to write it down from memory only. Suffice it to say, that it was a shoulder presentation, and the child turned by external manipulation. It was born alive in a vertex presentation.

After this sketch of the operation from the oldest times to the present day, we will now pass over to a description of the operation itself, which may be done in a few words, as the most important points are already alluded to in the historical part.

Advantages of the operation.—Indications.—Contra-Indications.—The great advantage and intrinsic value of the proceeding we are speaking of, is the safety for mother and child. It is void of that fear, and of that suffering which is connected with most of the other operations. The nearest point of comparison is turning, be it podalic or cephalic, by internal manipulations. In every instance where the hand of the operator is brought in contact with the inner surface of the womb, there is always a certain amount of suffering varying according to the particular features, proper to every individual case, according to to the sensibility of the womb, according to the skill and state of refinement of the accoucheur. It might be objected that under careful and experienced management, chloroform does away with all that might have been formerly urged to the disadvantage of any operation. I, myself, am in the habit of using chloroform extensively, and more particularly, in operative midwifery cases. But who is the man who would hesitate in the choice between two modes of operating, of which the one is innocuous, on account of the chloroform, and the other equally harmless without chloroform? The operation has for its principal object to avoid turning by the feet, thus bringing the child in the safest presentation imaginable. I think all of my readers are enlightened enough to understand, without any further explanation, the full weight of this advantage. Before speaking of the indications, let me say a few words with regard to the manner in which these manipulations do influence the position of the fœtus in utero. While the first advocates of this proceeding imagined that the direct motion imparted to the fœtal parts by outside pressure, was the only way in which their position was influenced, it was left to the ingenuousness of Drs. Joerg, Busch and Kilian to call our attention to the *dynamic* effect of these manipulations upon the uterus. There is no

doubt a great deal of truth in this belief, if we bear in mind, that the largest number of transverse or oblique presentations is not only accompanied, but even caused by deformities of the usually ovoid shape of the womb, and if they should be corrected, the situation of the fœtus would also come nearer to a more natural condition; then we can easily imagine why pressure exerted upon the womb from outside will be apt to correct malpositions of the fœtus. But it is our conviction that neither the dynamical nor the mechanical effect do either of them alone effect the change; it is a combination of both that does the work.

The operation is indicated in all those cases where the child presents in an oblique or transverse position, in such a way that the head is situated not far from the pelvic entrance, provided that there is nothing in the case which actually demands or may possibly after a while demand an actual interference for hastening the process of labor. For example, in all cases of neck and shoulder presentations, in all presentations of the trunk where the head is situated nearer to the pelvis than to the chest, we may try to correct the position of the child by external manipulations. In proposing this general indication, we follow the advice of all reliable authors. If we have not comprised in it Dr. Mattei's proposition, to perform the operation in cases of breach presentation, this was not done from a want of trust in his assertions, or in the reliability of the cases published by this ingenuous accoucheur, but rather because we think that breech presentations under ordinary circumstances, and skillfully managed, are just as safe for the life of the child as those of the head. But Mattei's proposition is of undeniable value in cases of pelves contracted to such a degree as to demand craniotomy; even if the head comes last—of pelves which would not admit of the execution of Simpson's well-known proposition. The caution not to try version by external manipulation, in cases where we want a prompt delivery of the child by all means, is derived from the fact that such trials do sometimes prove unsuccessful, so at least, unless continued for a long while. It would be wrong, for instance, to try these manipulations in a case of hemorrhage or convulsions, because of the loss of valuable time, which ought to have been applied in the performance of a prompter mode of delivery, and even should we succeed in a similar instance to bring the head down to the upper strait, this would afterwards prove a bar to the easy performance of delivery by the feet, if required by insufficiency of pains, which failed to firmly engage the head in the pelvic brim, as a preparatory step for delivery with the forceps.

The performance of the Operation.—The correct diagnosis of

the situation of the fœtus in utero by external examination, is the preparatory step and an intrinsic part of the operation. Before attempting to perform it, the operator must have in every single case a distinct idea of the presentation of the child in his mind, to the confirmation of which repeated inspection, palpation, and auscultation must be called to aid; internal examination will, in the great majority of cases, yield only negative results. This done, the woman is ordered to lie on her back, while the physician takes his position on the side of the bed opposite that where the head is located. Suppose the head is felt in the *left* iliac fossa, the operator places his *right hand* upon the cranial protuberance, while his left hand is placed on that portion of the uterus where the nates are situated. Now, gentle frictions are made upon the points indicated, and at once a pressure effected upon the head with a tendency to push it downwards and towards the mesian line, while the breech is gently pushed upwards and towards the opposite side. All this is done during an interval of the pains. As soon as another pain begins, both hands keep their place, and the woman is ordered to turn on her left side. With the remission of the pain the same manœuvre must be repeated, and continued until a change of presentation is effected. This having been ascertained by internal examination, the woman has to continue the posture on her left side, and a small hard pillow is to be placed just underneath that portion of the abdomen where the fœtal head was at first situated. If after a number of pains the head is found to have retaken its former situation, the manipulations must be repeated, and after turning has been effected again it is advisable to rupture the membranes, in order to keep the head from returning to where it was formerly imbedded. The rest of labor is conducted like an ordinary vertex presentation.

In some cases it is necessary to repeat these manipulations three or four times before the head becomes firmly engaged in the upper strait. But should the operator not have succeeded before the waters are discharged, it is not safe nor of any use to persevere in the operations. After the rupture of the amniotic bag the child must be turned by the feet, or on the head, by internal manipulations. Sometimes it is possible to effect a rectification of the presentation, by a proper posture of the mother on that side where the head of the child is situated, while a pillow is placed underneath the latter. This may be attempted even before labor has begun, as some authors, and especially Dr. Mattei, recommend it. The most suitable time for the performance of the operation as detailed above, is from the beginning of labor to perfect dilatation of the os. The operation has been attempted in the last weeks of pregnancy; but as the

pains themselves are a very important aid for the successful performance of the operation, it is not advisable to undertake it at an earlier season. There is no doubt that the position of the fœtus can be changed at any time during the last months of gestation ; but it is the general opinion of authors, that a lasting rectification can only be attained when the operation is performed at the time of the beginning of labor.

The only physical obstacle against a successful operation is an unusual thickness or tension of the abdominal walls, which prevents a clear diagnosis of the presentation. Finally, the womb itself might be by some cause or other too tender to allow of a continued pressing with the hands, or it might be so firmly contracted around the fœtus, owing to a scarcity of liquor amnii, that all our attempts would fail to succeed. But these are coincidences not very often met with, and it is therefore the more to be wondered at that this harmless operation is not generally attempted by obstetricians. The reasons for this unjustifiable neglect among practitioners on this continent, may be found in the want of recommendation of this operation by English and American authors, in the want of confidence attached to external examination, and perhaps in a very pardonable desire to choose rather an operation (turning by the feet) which never fails to have a striking effect, than one which may perhaps result in an unsuccessful attempt. But if we consider, that by this attempt nothing is lost for future action in another way; if we consider the trifling reaction which it leaves on the system of the mother; if we consider the advantages of a vertex presentation for the life of the child, we feel it our duty to call upon the profession to remember that there is such a thing as turning by external manipulation, and that those who have practised it most often were men the names of whom we only pronounce with a feeling of deepest admiration.

ART. IV.—*Anti-Lactescent properties of compressed sponge.* By P. STEWART, M.D., of Peekskill, N. Y.

MRS. K., from the city of New York, engaged me about three weeks before her expected accouchement with her fifth child, to attend her through that critical period, and, at the same time, with great earnestness, desired to know if something could not be done to prevent her having a broken breast. She stated, that in every previous confinement, she had endured protracted and intense suffering with her left breast, which always suppurated, and since her first child, she had never been able to procure any milk from it at all. She declared that the dread of the parturient process was nothing compared with that of a

broken breast. With this history of her four previous confinements, and because of her earnest entreaties, I determined, if possible, to prevent the milk from entering the gland from the first. With this view, I directed a piece of circular sponge, of the diameter of the breast, an inch or more in thickness, freed from all foreign substances, and subjected to a pressure of from fifteen to twenty lbs. for four or five days.

The day after her confinement, before the milk secretion began, I applied this sponge to the gland, making a hole in its centre with my finger, to receive the nipple, and by an appropriate bandage, made nearly equal pressure over the entire breast.

The result was, when the secretion of milk occurred in the other breast, none, whatever, occurred in the one subjected to the pressure, except at the periphery of the gland that the sponge did not cover, when it seemed to dam up, and formed a ridge nearly as large as the finger, around its entire circumference, which, however, disappeared in two or three days, by the application of oleum camphorata, not the slightest pain or uneasiness was felt in the breast, and the delight of the patient at the complete success of the prophylactic was almost beyond bounds. It is probable, the same pressure from any other substance, would have had about the same effect as the sponge, but I know of no article that would meet the indications with so much ease of application, comfort to the patient, and such complete satisfaction in all directions.

Dr. Batchelder highly lauds the compressed sponge, as an application to various tumors of the breast, mammary abscess, etc., but so far as my memory serves me, and my knowledge extends, neither he nor any other writer has mentioned it for the purpose of preventing the secretion of milk. That this case was not a delusion, seems evident from the following facts: 1st. The breast before confinement was large and full, precisely like the other one, except that its surface was marked by two or three cicatrices, the effects of abscesses in former confinements. 2nd. The milk was freely secreted in the periphery of the gland, beyond the border of the sponge, as has been already stated. 3rd. The breast in her other confinements, secreted quite as abundantly as the other, and simultaneously with it.

These reasons seem to render it morally sure that milk would have filled the gland, if the pressure had not been applied. The sponge was continued about two weeks, and up to the present time, some four months, no milk has appeared in her breast.

PEEKSKILL, September 29, 1859.

ORIGINAL LECTURES.

LECTURES ON VENEREAL.

Delivered at the College of Physicians and Surgeons of the University of the State of New York.

BY FREEMAN J. BUMSTEAD, M.D.,

SURGEON TO ST. LUKE'S HOSPITAL.

LECTURE VI.

Gleet:—Its Causes, Pathology, Symptoms and Treatment—Constitutional Remedies—Bougies.

GENTLEMEN:—A slight and chronic discharge from the urethra destitute of symptoms of acute inflammation, is called in medical language Blennorrhœa, in common parlance, a Gleet.

A gleet is generally the sequence of an attack of gonorrnœa which has been neglected, or treated imperfectly or without success. When following an acute attack of urethritis, without intermission, it is impossible to clearly define the line of demarcation between the two; to say where the gonorrhœa ceases and the gleet begins. In other cases, however, a preceding attack of gonorrhœa has been apparently cured; the patient has for some weeks or even months ceased attendance upon the surgeon, when he again returns, saying that for several mornings he has observed a small amount of discharge at the meatus urinarius. This is especially liable to occur with men of dissipated habits, who have had frequent attacks of gonorrhœa, and whose systems have been debilitated by an irregular course of life. In such instances it is probable that the complete cure of the preceding clap was only apparent; that some inflammation was left behind, lurking in the deeper portions of the canal, the symptoms of which were so slight as not to attract attention, until aggravated by debauch or other exciting cause. If the urethra be examined in these cases, by means of a full-sized bougie, in many of them there will be found to exist a greater or less contraction of the canal; for the presence of a stricture is one of the most fruitful sources of the persistence of a gleety discharge, and you will meet with patients, who for five, ten or twenty years, following an attack of gonorrhœa, have from time to time suffered from gleet, which has appeared and disappeared, *pari passu* with the aggravation or im-

provement of a stricture of the urethra. Other organic changes besides strictures are sometimes found to exist in the urethra and to be the cause of a gleety discharge. In several instances, in patients who also had warts on the glans penis, I have been able to discover vegetations within the canal, by separating the lips of the meatus. Such vegetations are chiefly confined to the fossa navicularis, although they may be more deeply situated. Polypoid growths in the urethra are also met with, but are extremely rare. They are peculiar to the prostatic portion of the canal, and according to Mr. Thompson, are usually accompanied by similar growths at the neck of the bladder or within this organ. (See Thompson on Strictures, p. 73 et seq.)

Idiopathic gleet, that is, gleet independent of any preceding acute urethritis, is also admitted. Such not unfrequently occurs in connection with disease of the prostate gland, and especially with the hypertrophy of this organ, so common in old men. Idiopathic gleet is also said to arise from disorders of the digestive function and from disease of the kidney or bladder, in consequence of which the urine is rendered abnormally irritant; but although these causes occasionally excite a temporary discharge from the urethra, I have never met with a case in which they could be said to be productive of a true gleet.

It is evident from what has now been said, that gleet may be induced or kept up by local causes, but the etiology of gleet would be far from complete, if we should omit to mention constitutional influences. The chief of these are general debility, induced by whatever cause, and a strumous, rheumatic or gouty diathesis. That general debility is a most fruitful cause of the persistence of a gleet, is evident when we see how frequent this disease is in persons whose constitutions have been impaired by excesses, and especially when we observe the beneficial influence of tonics and general hygienic measures in eradicating it. Again, persons of a strumous diathesis, who are prone to chronic inflammations of other mucous membranes, are particularly subject to gleet, as the sequence of an attack of gonorrhœa, and their disease is found to be benefited by remedies addressed to the constitutional taint. The influence of rheumatism and gout in producing urethral discharges has already been mentioned in connection with gonorrhœa. In the treatment of gleet it is of the highest importance to bear in mind these constitutional causes of the disease.

In many cases of this disease, the discharge is the only symptom. There is an entire absence of pain in the part, of redness and tumefaction of the lips of the meatus, and of scalding in passing water. In some instances, however, the patient experiences a feeling of uneasiness in the penis or perineum, or an itching about the glans or in the deeper portions of the canal, and this may be constant or only attendant upon the passage of the urine. Again, if the lips of the meatus be glued together in the morning, and be not separated before passing water, the distention of the canal by

the urine before it has overcome the obstruction, excites a sharp pain in the part, which is at once relieved when the stream finds free exit. This pain may be avoided by separating the lips of the urethra before micturition.

The discharge in gleet varies in its character, in its quantity, and in the times of its appearance. In some instances it evidently consists of a mixture of pus and mucus, and this is most frequently the case, when the gleet is the result of a recent attack of gonorrhœa. In other instances, it is perfectly transparent to the unassisted eye, and, under the microscope, is found to consist of a clear fluid, containing epithelial cells and free nuclei, with only a few rare pus globules, or it may be entirely destitute of the latter. Again, it may be composed of masses, like the coagulated white of an egg, which are with difficulty forced from the urethra during straining at stool or in making water. When dependent upon a stricture, the discharge is sometimes thick and purulent, and sometimes mucous, either alone or containing shreds of dense material. It may be constant in its appearance and sufficiently copious to stain the linen, or it may be perceptible only in the morning on rising, when the lips of the meatus are found to be glued together, and a drop of pus or mucus may be made to appear on pressure; or it may be forced from the canal during defecation or be mingled with the last drops of urine in micturition. The small amount of the discharge in most cases of gleet, and the frequency of the disease among soldiers, has given rise to the French popular name of *goutte militaire.*

The mild symptoms of gleet now described are liable to be aggravated by any cause which produces urethral or vesical irritation. In other words, a gleet is readily transformed into a clap. Excess in eating, alcoholic stimulants, free sexual indulgence, violent exercise, a long ride, or exposure to sudden changes of temperature, may bring on a copious purulent discharge, attended by tumefaction of the parts, scalding in micturition, and all the symptoms of acute gonorrhœa. A few hours alone are required for this change to take place, and it is doubtless in this manner that we are to explain the sudden reappearance of some attacks of gonorrhœa—often supposed to be due to a fresh contagion—when patients, too confident that they are well, are hasty in indulging in drink or coitus.

Hunter, in his work on Venereal, states that "a gleet is perfectly "innocent with respect to infection," and that in the relapses which so frequently occur, "the virus," in his opinion, "does not "return." This statement, although often refuted, still finds place in many elementary works, which are in the hands of medical students. A doctrine, more dangerous to the peace of families, could scarcely be promulgated. It is indeed true that men are occasionally met with who have for years suffered from gleet, and who have yet had frequent connection with their wives with impunity, but where contagion ceases and immunity begins, no one can tell;

and even if we were able to pronounce a discharge of a certain degree of purity innocuous, we could not foresee the effect upon it of a few hours' sexual indulgence. It may at the present moment be wholly mucous and entirely innocent of contagious properties, and yet a few hours hence be purulent and in the highest degree dangerous. The fact is, no one can pronounce sexual congress safe, so long as a urethral discharge exists, and in replying to the questions on this point, so frequently put by patients, the surgeon should not only avoid incurring the responsibility of allowing it, but do all in his power to dissuade from it.

Our knowledge of the pathology of gleet is extremely imperfect, since opportunities for post-mortem examinations are very rare, and the deeper portions of the urethra are beyond the reach of direct observation, even with the aid of the uretroscope. The seat of the disease doubtless varies in different cases, and perhaps influences in some measure the character of the discharge. For instance, Mr. Milton is inclined to regard the masses like white of egg, which are sometimes expelled in this disease, as coming from the prostate or neck of the bladder. I believe that in most cases gleet is seated in the deeper portions of the urethra, and when the discharge is sufficiently copious to be made to appear on pressure, we may often satisfy ourselves of this fact by commencing with the anterior portion of the penis, and pressing from behind forwards, first for the distance of an inch, then for two inches, and so on, until the fluid be made to appear, when it will be found that it has been elicited from the bulbous or membranous region. The small quantity of the discharge in some cases of gleet would seem to indicate that the diseased surface is but of small extent.

Mr. Dick (*Gleet: its Pathology and Treatment, p.* 5) distinctly states that there is generally only one spot affected by chronic inflammation, and very rarely several; and that these spots are chiefly to be found either behind the fossa navicularis or just at the beginning of the bulbous portion, but he fails to tell us by what means he has arrived at such accurate diagnosis, and his observation cannot therefore be received with full confidence. The pathological changes in the affected part are probably similar to those which occur in chronic inflammation of other mucous membranes, as the conjunctivas tear passages and the external meatus auditorius, and the extension of the inflammation to the lining membrane of the follicles and to the ducts which open into the deeper portions of the urethra, may account for the persistence of the disease and the difficulty of its cure.

The obstinacy of many cases of gleet has become almost proverbial, and is the subject of a standing joke within the walls of the *Hôpital du Midi*, in Paris, where the student annually hears the statement, that "if the world should be again reduced to chaos, a *goutte militaire* would still remain unchanged." Although this disease is so mild in its symptoms, and

really gives the patient but little discomfiture, yet the effect upon his mind is very sad. He is constantly dwelling upon his infirmity, and unless he find relief, soon becomes a hypochondriac, one of that class of syphilophobists, who are met with in the office of every physician. His sufferings, although chiefly mental, are none the less real, and demand that our utmost efforts should be put forth for their relief. With patience and perseverance, I believe that the attempt will rarely fail to be crowned with success.

In the treatment of gleet our remedies should be addressed both to the general system and the local disease. It may be laid down as a rule, to which there are but few exceptions, that in this disease, the tone of the general health is below par. I do not mean by this remark that you will find every patient with gleet, weak and emaciated; many will appear to be in excellent health; but, on inquiry, you will often learn that even these men are not capable of the same amount of exertion that they were formerly accustomed to; they are sensible that they have lost some of their animal vigor, and the good effect of general hygienic measures and tonics in their treatment will be unmistakable. A plain but substantial diet of fresh meats, vegetables, etc., fresh air and attention to the cleanliness of the skin, by means of frequent sponging or bathing, are required. With regard to exercise: although a long walk or ride especially when carried to fatigue, will be found to aggravate the discharge, yet when commenced with moderation, and gradually and steadily increased in proportion to the strength, they are found to be highly beneficial; and to this rule, even horseback exercise is not an exception. Healthy exercise of the mind is no less important than that of the body, and the attention of the patient should be distracted as much as possible from his disease, and all books and associations calculated to excite the passions be avoided. The bowels should be kept open daily. This should be accomplished, if possible by selecting such articles of food as are laxative, and by regularity in the hour of going to the closet, or by the administration of medicine if required. One of the following pills taken at bedtime, will usually insure a free stool in the morning.

℞. Strychniæ, gr. ss.
Pil. colocynth. comp. ʒss.
M.

Divide into thirty pills.

In the tincture of the chloride of iron, we have a most valuable combination of a tonic and an astringent; which, in most cases of disease of the generative organs in the male and female, is unequaled by any of the more modern and elegant preparations of this mineral. It may be given in doses of from five to twenty drops, largely diluted with water, three times a day, directly after meals. If the dose be properly graduated, it less frequently ex-

cites headache in the male than the female ; should this unpleasant symptom occur, iron reduced by hydrogen may be substituted for it, in doses of three grains, three times a day. Where the constitutional debility is marked, the union of quinine with iron may be desirable, as in the following :

℞ Ferri et quiniæ citratis, ʒj.–ij.
Aquæ, ℥j.
Syrupi limonis, ℥ij.
M.

A teaspoonful after each meal.

℞ Tincturæ cantharidis, ʒi.
Quiniæ sulphatis, ʒss.
Tincturæ ferri chloridi, ʒij.
Acidi sulphurici diluti, xxx.
Aquæ destillatæ, ℥viij.
M.

One ounce three times a day.—(Childs.)

Other salts of iron, as the tartrate of iron and potassa, or the pyro-phosphate of iron, may be substituted for the citrate, in the first of the above prescriptions.

In the administration of iron I have always found a rule laid down by Trousseau a good one, viz., not to stop the medicine suddenly; after the object for which it is administered has been attained, it may be omitted for a fortnight, when it should again be resumed for a few weeks; in this way its effect is rendered much more permanent.

With patients of a strumous diathesis, cod-liver oil, the syrup of the phosphates, or Blancard's pills of iodide of iron, may often be used with advantage. I have found that the iodide of potassium has a tendency to increase the discharge from the urethra, as it often does discharges from other mucous membranes, and I do not therefore administer it. This effect of the iodide may frequently be observed, when we are giving it for tertiary syphilis to patients, who, at the same time, are affected with gleet.

From what has already been said of copaiba and cubebs, it is evident that but little good can be expected from their administration in cases of chronic urethral discharge. Moreover, most patients, whose disease has arrived at this stage, have already taken them *ad nauseam*, for their preceding gonorrhœa; hence, we are rarely called upon to administer them in pure gleet. In those cases, however, in which the gleet has relapsed into a clap, they may be given with benefit, especially when combined with a tonic, as in the *dragées* of copaiba, cubebs and citrate of iron; in Meot's pills, the formula for which has already been given; and as in the following prescription :

℞. Copaibæ, ℥ss.
Tincturæ cantharidis, ℥ss.
Tincturæ ferri chloridi, ℥j.
M.

DOSE—*Thirty drops three times a day.*

You will observe that the tincture of cantharides is an ingredient of several of the prescriptions which I have given you. Experience has shown us that this drug exerts a decided curative action in many cases of gleet, and in gonorrhœa also, in the chronic stage. It is a favorite remedy with the homœpaths, in doses of a drop of the tincture every few hours, in the acute stage of clap, and is considered to be indicated by scalding in micturition, chordee, and a greenish or bloody discharge. I have used it however only in the chronic stage. The tincture may be given in doses of three or five drops three times a day, or it may be combined with iron, as follows:

℞. Tincturæ cantharidis, ℥ij.
Tincturæ ferri chloridi, ℥vj.
M.

Ten drops in water, three times a day.

In some cases of gleet there is considerable irritability of the neck of the bladder present, as shown by a frequent desire to pass the urine and unpleasant sensations in the perineum. In these cases benefit will be derived from the administration of the salts of potash, combined with hyoscyamus, as in the prescriptions already given when speaking of the acute stage of gonorrhœa. Canada balsam is also excellent under these circumstances.

℞ Abietis balsameæ, ℥ij.
Div. in pil., no. xxiv.

Two, three times a day.

The treatment of no case of gleet should be undertaken without a careful preliminary examination of the urethra, by means of a full-sized bougie, to ascertain if a stricture be present. If the slightest contraction of the canal be found, it should be dilated by the passage of bougies, repeated every second, third, or fourth day, according to the tolerance exhibited by the urethra. The size of the bougie should be adapted to the calibre of the contracted portion, and we should avoid exciting inflammation by undue force, or a prolonged sojourn of the instrument in the canal. In several instances I have seen swelled testicle excited by the forcible introduction of a large bougie for the relief of a stricture. But, for full directions for the treatment of strictures, I must refer you to special treatises on this subject, and particularly to the work of Mr. Henry Thompson, published in London, since the limits of these lectures do not permit the full consideration of this subject.

Having now spoken of the condition of the general system, and the complications which may exist, we have, as it were, cleared the track and smoothed the way for the consideration of remedies especially addressed to the local disease.

Out of the multitude of means proposed for the local treatment of gleet, there are only three which can be said to have stood the test of experience, and these three, either alone or combined, will rarely fail of success, if properly persevered with. I refer to bougies, injections, and blisters.

The frequent passage of bougies is a very efficacious method of treating gleet, even where no stricture is present requiring dilatation. Do not ask me how how the bougies effect a cure, for I confess that I do not know. They are said to "set up a new action in the part," but of the exact meaning of this expression I am ignorant. Perhaps by their distention of the canal, they expose lacunæ, in which minute quantities of matter would otherwise lodge, and keep up the disease ; perhaps they act as counter-irritants. Whatever their mode of action, however, of their efficacy their is no question. They are highly recommended by the most eminent writers on venereal, and, in my own hands, I have found them unsurpassed by any other method of treatment.

I am very partial to olive-pointed bougies, or bougies gradually tapering toward their extremity and terminating in an enlargement shaped like an olive. They are introduced with great ease and little inconvenience to the patient, and the contraction back of the olive point facilitates the introduction of medicated ointments into the deeper portions of the canal. The bougie should be of such a size as to fully distend the canal but not to stretch it, and it should be smeared with simple cerate, lard, olive or castor oil, or glycerin. The bladder should first be emptied, and I prefer that the patient should assume the recumbent posture. The first passage of a bougie is often very disagreeable to the patient, although it may be introduced with the greatest gentleness and excite no pain whatever. This feeling is often carried so far as to produce syncope, hence it is better to prolong the first session for a few minutes only. After a few insertions, it ceases to give any annoyance, and the instrument may be retained for from half an hour to an hour.

It sometimes happens that the use of the bougie aggravates the discharge, appearing to wake up the old clap which has for a while slumbered. In such cases when the discharge becomes copious and purulent, it is best to omit the bougie and resort to injections, under which the disease will often be found to disappear entirely and permanently. This aggravation of the symptoms, however, according to my experience, takes place in the minority of cases only.

With this exception, the passage of the bougie may be repeated every second or third day at first, and afterwards every day, or in some instances as often as twice a day. The length of time

requisite for a cure by means of bougies, varies in different cases. As examples of their successful employment I may mention one case recently under my care, a gleet of four years' standing, which was treated with the tincture of the chloride of iron internally, and the introduction of bougies every second day, and in which a cure was effected in two weeks. In another case, a gleet of nine months, the discharge disappeared in three weeks under the use of the same means. Other similiar cases might be mentioned, but such satisfactory results cannot by any means be expected in every case. In many, this treatment must be continued for several months, or other measures, as injections and blisters, be resorted to.

Bougies may be medicated in various ways. Calomel rubbed up with sufficient glycerin or oil to cover it, forms a very cleanly and excellent mixture with which to anoint the bougie, and I think materially assists the curative action. Mercurial ointment may also be used, either alone or combined with extract of belladonna, the latter being added in case the urethra is irritable.

℞. Unguenti hydrargyri, ℥ss.
Extracti belladonnæ, ʒss.
M.

When it is desired to stimulate the mucous membrane, we may employ the diluted ointment of red oxide of mercury, or an ointment containing a few grains of nitrate of silver, but these stimulants should not be continued for any length of time, lest they keep up the discharge.

℞. Ung. hydrarg. oxidi rubri, ʒj.
Adipis, ʒiij.
M.

℞. Argenti nitratis, gr. v–x.
Adipis, ℥j.
M.

LECTURE VII.

Treatment of Gleet concluded: Injections—Blisters.

FOR much that has reference to the use of injections—the materials composing them and the manner of their employment—I must refer you to what I have already said in connection with the treatment of the third stage of gonorrhœa.

In gleet as in gonorrhœa, I prefer the sulphate of zinc or nitrate of silver to other salts, and a weak in preference to a strong solution. Success depends in a great measure upon the thoroughness and frequency of the application. From two to three grains of the sulphate of zinc to the ounce of water may be taken as the standard of medium strength, and the solution should be employed as frequently as the patient is able to pass his water,

or every two or three hours. I believe this frequent use of the injection to be of the first importance. The same injection which fails when used two or three times a day, will often succeed when employed every few hours.

A solution of nitrate of silver cannot be employed so often as this. When very weak, as a sixth of a grain to the ounce, it may be used twice a day; but I generally employ it of the strength of from two to five grains to the ounce, injecting it with my own hands once or twice a week, and allowing the patient to use a solution of the sulphate of zinc in the meanwhile. Whenever irritant injections, as those containing nitrate of silver, are used, the surgeon should constantly be aware that it is possible to keep up the disease by the very means designed for its cure.

This, the ordinary method of using injections, answers every purpose, when the disease is confined to the anterior portion of the urethra; but when, as is true in most old cases of gleet, it is seated in the deeper portion of the canal, this method fails, simply for the reason that the injected fluid does not reach the affected tissue. That we cannot, by means of a syringe introduced within the meatus, freely inject the whole length of the urethra, is evident from the fact, that after a certain quantity—about half an ounce—is thrown in, the remains of the contents of the syringe is forced out, either at the side of the point of the instrument, or finds its way above the piston.. The point of obstruction met with by the injected fluid is situated at the commencement of the membranous portion of the urethra; and the obstruction is due to the contraction of muscular fibres, which serve as a sphincter to guard the urinary passage against the entrance of foreign bodies. What part in this contraction is played by the muscular fibres proper to the urethra, what by Wilson's muscle, and what by the bulbo-cavernosus, it is unimportant to our present purpose to inquire. This sphincter is analagous to the similar muscles situated near the outlet of other mucous passages of the body. All persons who are familiar with catheterization, are aware of the temporary obstruction which it presents to the passage of a catheter or sound.

It is not asserted that this sphincter is entirely impassable to injections from without. If the spongy portion of the urethra be filled with pure water, the fluid retained by compression of the meatus, and pressure be made from before, backwards along the course of the canal, the sphincter in a few seconds relaxes in a measure, and allows a portion of the injection to penetrate beyond it, and at the same time the patient feels a desire to pass his water; but it is only a small portion of the fluid which thus advances towards the bladder, and not a sufficient quantity enters to fully distend the canal, or to make a thorough application to its walls. Again, when, instead of pure water, an irritant fluid is used, the muscular action is heightened, and the difficulty of penetrating to the deeper portion of the urethra increased.

In order to effect the direct application of an astringent fluid

to the diseased surface in gleet, when this disease is seated in the membranous or prostatic portion of the urethra, surgeons have practised and recommended injections through a catheter, the point of which should be introduced beyond the bulbous portion of the urethra, or even into the bladder; in the latter case, the the fluid being thrown into the bladder, the patient has been made to evacuate this organ immediately, and thus insure the application of the fluid to the walls of the urethra. Mr. Langston Parker in his work on syphilitic diseases, says: "In affections of the deeper-seated portions of the urethra, I pass a catheter into the bladder itself, and throw the injection through it to the extent of four or six ounces; then withdraw the catheter, let the injection remain a few minutes, and desire the patient to force it out. The bladder should be emptied before the injection is used. In this manner weak solutions of creasote, bichloride of mercury, nitrate of silver, the tincture of the sesquichloride of iron, and other remedies, may be used with perfect safety and a very great amount of success." I have never been able to convince myself of the "perfect safety," nor can I see the necessity, of injecting the bladder for disease of the urethra in the manner recommended by Mr. Parker; consequently I have never done it; but I am in the habit of injecting the deeper portion of the canal, by means of a catheter, with its point introduced into the membranous or prostatic portion of the urethra, and with very satisfactory results in long-standing cases of gleet. I formerly used an ordinary gum-elastic catheter and a urethral syringe for this purpose, but lately have employed the "urethral syringe with extra long pipe," manufactured by the American Hard Rubber Company, as more convenient.

Recently, M. Diday, of Lyon (*Annuaire de la Syphilis, année* 1858), has given very methodical and minute directions, as to the manner of employing these injections, which are in substance as follows: The length of the urethra from the meatus to the neck of the bladder is first to be measured. For this purpose, introduce a catheter or gum-elastic bougie, with two lateral openings at the end, into the bladder, when the urine will begin to flow through the instrument. Now gradually withdraw the catheter until the urine ceases to appear, and at once mark the point in contact with the meatus, by tying a string round it. On withdrawing the catheter, the distance from the string to the extremity will give you the distance from the meatus to the neck of the bladder. This procedure has allowed a portion of the urine to enter the urethra, and the active principle of the injection would be decomposed by it to a certain degree, if we should inject at once; it is therefore better to wait half an hour until the urethra is a gain comparatively free. After this lapse of time let the catheter be again introduced, taking care, with the string tied round the stem as a guide, that its point penetrates to the vicinity of the neck of the bladder, but does not enter this organ. Now

let the patient hold the catheter in place while the surgeon inserts the point of a syringe in its outer extremity and throws in a few drachms of the fluid to be injected. After waiting half a minute or so, the catheter is to be withdrawn for a third of an inch, and and as much more of the fluid thrown in, and this process is to be repeated until the point of the instrument is withdrawn as far as the bulbous portion.

So long as the extremity of the catheter is in the prostatic or membranous region—that is, beyond the sphincter muscle already referred to—none of the injected liquid escapes from the meatus; but so soon as it is withdrawn sufficiently to occupy the bulbous portion of the canal, the fluid finds exit by the side of the stem of the instrument. What becomes of the injection in the former instance? It must evidently have entered the bladder, for it all disappears, no matter how large a quantity be thrown in. And here you may inquire, why it is not equally objectionable to have the fluid enter the bladder in this way, as to have it injected directly into this viscus, as is done by Mr. Parker. I reply that in the latter case, we must employ a strong injection in order to allow for the partial decomposition of the contained salt by the urine, while in the former the injection may be weak, and whatever portion of it enters the bladder is entirely decomposed and rendered inert. The advantages of this mode of injecting are obvious. The urethra is distended and freed from folds by the catheter, which should be of full size, and the fluid is applied directly to the mouths of the lacunæ and ducts, in which the disease probably lurks. Again, by observing the distance of the string tied round the catheter from the meatus when the injected fluid first begins to escape, we can judge of the length of the canal beyond the sphincter, and on subsequent occasions limit the injection entirely to the prostatic and membranous portions, if we see fit.

Injections thus limited to the deeper portions of the urethra, excite but little pain. In this respect, they differ widely from the effect of injections of the same strength into the spongy portion. For instance, if we inject a solution of five grains of nitrate of silver to the ounce of water by the ordinary method, the patient suffers considerably, but if we inject the same solution into the deeper portion of the urethra, and limit it to this region, but little, if any, pain is experienced. In this respect, the urethra corresponds to other mucous canals, which are generally most sensitive near their external outlet. The chief sensation following the injection, is an urgent desire to empty the bladder, and this is often so intense, that it cannot be resisted. It is important, however, to delay micturition as long as possible, so as to give the injection time to act before it is neutralized by the passage of the urine. Diday advises that the patient be compelled to leave the office, and find his way home before accomplishing the act. During the following twenty-four hours, the desire to pass water is somewhat more frequent than ordinary, but no

pain of any consequence is experienced. The discharge for a few hours after the injection is slightly increased, and more purulent, but these symptoms pass off in the course of a day. It is thus seen, that injections limited to the deeper portions of the canal are unaccompanied by many of the unpleasant effects which attend caustic injections of the anterior portion of the urethra. MM. Bonnet and Diday, of Lyon, highly recommend injections executed in the manner now described, in cases of spermatorrhœa, in place of Lallemand's *porte caustique*. They state that they are equally efficacious, and not liable to confine the patient to the bed, nor to excite severe pain, hemorrhage from the urethra, or retention of urine, as Lallemand's instrument often does.

In using these deep injections, I have confined myself chiefly to a solution of nitrate of silver, of the strength of five grains to the ounce of water; but I have also employed a solution of sulphate of zinc, of the strength of from five to ten grains to the ounce. They may be repeated every two or three days, and, in the meanwhile, the patient may use injections by the ordinary method, if the anterior portion of the canal appear to be also involved.

In addition to the formulæ for injections already given, when speaking of gonorrhœa, I will add the following:

℞ Hydrargyri bichloridi, gr. j.
Aquæ puræ, ʒviij–xij.
M.

℞ Gallæ, ʒj.
Aluminis, ℈ij.
Aquæ, ʒviij.
M.

℞ Acidi nitrici, gtt. xvj–xl.
Aquæ, ʒviij.

℞ Tinct. iodinii, gtt. viij.
Aquæ, ʒviij.
(Ricord.)
M.

℞ Ferri iodidi, gr. viij.
Aquæ, ʒviij.
(Ricord.)
M.

Ricord advises the last two formulæ to be used in gleet in scrofulous subjects, but the iodine can hardly be supposed to have any specific action, when injected into the urethra.

Blisters were long ago recommended for the cure of obstinate cases of gleet, but they had almost fallen into disuse, when they were revived by Mr. Milton, in his work on the treatment of gonorrhœa. This author speaks of them in the following exalted terms: "I have seen two blisters, with a mild injection or two, at once cure a clap which had defied the most energetic treatment;

and *as I never found a case which resisted blistering and injections together, that was not complicated with stricture or affection of the testicle, I am slowly arriving at the conviction, that every case of clap or gleet, however obstinate, may, if uncomplicated, be cured by blistering singly or combined.*"* It is to be feared, however, that this remedy has proved less successful in the hands of other surgeons than in Mr. Milton's. Recent writers who have spoken favorably of them, appear to have done so chiefly on Mr. Milton's authority; others, as Mr. Langston Parker, have given their testimony decidedly against them. My own experience with blisters has not been so satisfactory as Mr. Milton's, though I have not, perhaps, used them sufficiently to enable me to speak confidently of their efficacy. I have employed them in about a dozen cases, but have not found them attended with such a degree of success as to lead me to prefer them to other and less disagreeable modes of treatment. They are still, however, worthy of a trial, in cases which have resisted the use of bougies and injections.

The manner of employing them is of considerable importance. The hair about the root of the penis should be cut short with scissors. A piece of paper is then to be wrapped entirely around the penis, and cut so as to form a pattern of its surface from the pubis to within half an inch of its extremity. This pattern is to be laid upon the blister, which is to be cut out in a corresponding manner, applied to the penis, and retained in place by a string wound around it. If the blister be left on the same length of time that it is usually applied to other parts of the body, or if it be allowed to slip out of place, and come in contact with the scrotum, severe pain will be excited, and a nasty, disagreeable sore be produced, which will be apt to disgust the patient with the surgeon and his treatment. Hence, the time during which the blister is applied should be limited, and the patient should keep quiet while it is on. I prefer to apply the blister in the morning, lest the patient be deprived of sleep, and an application for a period of two hours is sufficient. After the lapse of this time, the surface will be found to be reddened, but not vesicated, unless, perhaps, in a few small spots. The blister should now be removed, and the penis covered with a rag spread with simple cerate, and still farther protected from friction by an external layer of cotton wadding. On examining the parts after a few hours, it will be found that numerous bullæ have formed on the surface which at first appeared to be only reddened. These may be pricked, and the serum which they contain evacuated, but the epidermis should be carefully preserved. I have sometimes found the extremity of the prepuce beyond the site of the blister, puffed out with an effusion into its cellular tissue. This effusion may be left to take care of itself, or, if excessive, be evacuated by a few punctures with a lancet.

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* The italics are in the original.

Cantharidal collodion is a more convenient application than the unguentum lyttæ, but its effect cannot be limited like that of the latter, which should therefore be preferred. When thus applied for a few hours only, I can confirm Mr. Milton's statement, that blisters do not excite severe pain nor produce a troublesome sore. The first effect of their application is to increase the urethral discharge, which can only be expected to be benefited in the course of five or six days. The blister may be repeated at the end of a week, if any discharge still remain. The perineum may be blistered in a similar manner, but this will require the patient to be kept in bed until the vesicated surface has healed.

These, gentlemen, are the most approved methods for the treatment of gleet. Other modes of treatment require only a passing notice.

A fresh clap supervening upon an old gleet not unfrequently cures the latter ; hence some surgeons are in the habit of taking measures to aggravate the discharge in gleet and render it acute, with the hope that the gleet will disappear on the subsidence of the acute inflammation. Acute inflammation may readily be induced by cauterizing the urethra with Lallemand's *porte-caustique*, or by injecting a solution of ten or fifteen grains of nitrate of silver to the ounce of water. This treatment corresponds to the abortive treatment of the first stage of gonorrhœa. I have not obtained very satisfactory results from this method ; in most cases I have found the gleet persist after the subsidence of the acute inflammation, and I now rarely, if ever, have recourse to it.

It has been proposed by several authors to introduce meshes of lint, by means of a probe, into the urethra, so as to separate the affected surfaces from each other, on the ground that their contact doubtless assists in keeping up the disease. Long and narrow bags of gold beater's skin have also been made, which after their introduction, could be inflated with air or water. Such treatment, however, is very uncertain in its effects, and very disagreeable in its application, requiring to be renewed after each passage of the urine.

Finally coitus has been suggested as a remedy for gleet. Sexual intercourse does occasionally cause the disappearance of a gleety discharge, but it is more likely to increase it, and on the ground of morality is deserving of the highest reprobation.

LECTURE VIII.

Balanitis: Its causes, symptoms, and treatment.

IF the prepuce be retracted, a mucous surface of considerable extent is exposed, a portion of which covers the glans penis, and the remainder consists of the internal reflection of the prepuce. This surface may be the seat of disease, similar to that which has been described as affecting the urethra. If the disease be confined, as it sometimes is, to the membrane covering the glans, it is

properly called balanitis ; if to the internal surface of the prepuce, posthitis, and if it involve both, balano-posthitis ; all these varieties, however, for the sake of convenience, are commonly included under the one name, balanitis. Gonorrhœa spuria, balano-preputial gonorrhœa and external blennorrhagia are other terms by which this disease was formerly known.

Persons who have a long prepuce and in whom the glans penis is habitually covered, are especially liable to balanitis, for the protection which the mucous membrane constantly receives from contact with the clothes and air, renders it abnormally delicate and sensitive. This is, of course, especially the case with men whose preputial orifice is naturally so contracted that it is impossible ever to uncover the glans, or who have, in other words, congenital phymosis. But this condition of the parts not only predisposes to balanitis, but often gives rise to an exciting cause of this disease. The secretion from the glandulæ odoriferæ, situated in the furrow at the root of the glans, which is so copious in all men as to require daily removal, gradually collects and concretes, until a mass is formed which acts like a foreign body and excites inflammation of the surrounding mucous tissue. In several instances I have known balanitis dependent upon this cause, mistaken and even treated for gonorrhœa of the urethra.

A gentleman, affected with congenital phymosis, once applied to me for treatment, stating that six months before, while in South America, he observed a purulent discharge from the end of his penis. He had not had connection with a woman for six weeks, and, to use his own words, "did not know what to make of it." He applied to a physician who told him he had a clap, and gave him an injection and a mixture of copaiba. The discharge became no better, and on his passage across the Isthmus, a few weeks before I saw him, he consulted another doctor, who gave him another injection and told him to take copaiba capsules. He had now been pursuing treatment for six months, and was no better than when he began. On examining the parts, I found the preputial orifice was so small that it was with some difficulty that I could expose the meatus. After succeeding in doing so, however, I wiped away the discharge with which it was smeared, and made pressure from behind forwards along the course of the urethra. This manœuvre failed to produce any farther matter, but by pressing the prepuce against the glans, I found I could squeeze out an abundance. I told my patient that he had no gonorrhœa, and that all that he required to cure his complaint, was to be circumcised. He submitted to the operation the following day, when I found a large collection of sebaceous matter beneath the prepuce. With the healing of the incisions, all traces of his disease disappeared. It is probable that this man never had any urethral gonorrhœa at all.

In general, the causes of balanitis are nearly the same as those of gonorrhœa of the urethra, and after the full exposition of the

latter which I gave you in a previous lecture, it will be unnecessary to dilate on the former. They may be enumerated as follows: intercourse with a woman who has leucorrhœa; intercourse with a woman just before, during, or just after her menses; intercourse with a woman having gonorrhœa; excessive intercourse with a woman apparently, in every respect, well; masturbation, prolonged exercise on foot or horseback, and errors in diet. To these should be added want of cleanliness and the presence upon the glans or preputial fold, of a chancre, vegetation, mucous tubercle, or any secondary or other eruption.

A patient with balanitis, complains of tenderness of the end of the penis, an itching or tingling sensation within the preputial orifice, and smarting in passing water if the urine come in contact with the inflamed surface after its exit from the meatus. If we are able to retract the prepuce, we find the mucous surface reddened, sensitive and denuded of its epithelium in patches. These superficial excoriations are generally of a darker red than the surrounding surface, the latter often being of a whitish color, owing to the epithelium being slightly raised but not yet detached. They are generally multiple and irregular in outline, and are of the same character as the superficial ulcerations met with upon the os tincæ in women. The affected surface is covered with a muco-purulent secretion, which varies in quantity and consistency in different cases. When the preputial orifice is so narrow as not to afford it free exit, it may collect in the corona glandis and form an abscess, requiring a puncture through the prepuce for its evacuation. In addition to the above symptoms, we find, in severe cases, more or less œdema of the prepuce, which is puffed out by infiltration of serum into its cellular tissue, and phymosis may exist even when not congenital. The inconvenience excited by an attack of balanitis is comparatively slight, and the disease is very amenable to treatment and of short duration. There is rarely any constitutional disturbance, and the glands in the groin seldom become inflamed, or if they should become slightly enlarged and sensitive, they rarely, if ever, suppurate.

Balanitis is a disease which is very liable to recur. One attack seems to leave a predisposition in the parts to the occurrence of another, and the influence of a long prepuce or congenital phymosis is more evident in producing these relapses than in giving rise to a first attack. Thus we find men who have arrived at the age of thirty or forty years, with this malformation, who have never had balanitis, but who, after having one attack, are continually subject to others, following the slightest provocation, such as intercourse with their wives, or even mere imprudence in diet.

The excoriations of the surface met with in balanitis, bear a close resemblance to one form of chancre, viz., the superficial chancre; indeed, excepting the fact that the excoriations of balanitis are commonly multiple, while the superficial chancre is

generally single, and that the latter, if of the infecting type as it almost always is, is indurated and attended by induration of the lymphatic ganglia in the groin, I know of no practical and ready method of distinguishing the two. This resemblance will be better appreciated when we come to describe this form of chancre. The danger lies, not so much in mistaking balanitis for a chancre, as in overlooking a chancre, especially when its presence has excited inflammation of the surrounding surface, or in regarding it as a simple excoriation due to the balanitis. This has doubtless been the error in many of the reported cases of successful inoculation of the muco-pus of balanitis, which is, in fact, purely a simple disease, entirely free from any specific qualities. M. Diday, in his work entitled *Nouvelles Doctrines sur la Syphilis*, has shown how destitute of foundation is the opinion of Vidal and others to the contrary.

When the prepuce can be retracted, the treatment of balanitis is exceedingly simple. All that is necessary, in most cases, is to free the parts from any collection of matter by gently washing them with tepid water, and then to cut a piece of lint or soft linen into pieces about an inch square, and laying them upon the glans with their upper margin well up in the corona, to draw the prepuce over them. In this manner the inflamed surfaces are isolated from each other, and speedily take on a more healthy action. The frequency with which this application should be repeated depends upon the copiousness of the discharge ; generally from two to four times in the twenty-four hours is sufficient, and a cure is usually attained in a few days or a week. In severe cases, however, some farther measures, besides those mentioned, may be desirable. If the surface be much excoriated, it is well to pencil it over lightly with a crayon of nitrate of silver, or to make an application of a solution of this salt, of the strength of a drachm to the ounce of water. Again, instead of using the lint dry, it may be moistened in one of the following mixtures:

℞. Liquoris plumbi diacetatis, ʒj.
Aquæ puræ, ʒij.
M.

℞. Liquoris sodæ chlorinatæ, ʒiij.
Aquæ, ℥v.
M.

℞. Acidi tannici, ʒj.
Glycerin, ℥j.
M.

℞. Extracti opii, ϑj.
Zinci sulphatis, gr. vj.
Glycerin, ℥j.
Aquæ, ℥ij.
M.

When phymosis, either congenital or acquired, exists, the parts are less accessible to treatment. In this case the nozzle of a syringe holding several ounces and filled with tepid water, should gently be inserted between the glans and prepuce, and its contents be discharged into this cavity, in order to free it from all collection of matter. A few drachms of a solution of nitrate of silver, or of one of the lotions just mentioned, may then be thrown up, and this should be repeated several times in the course of the day. In these cases, Mr. Langston Parker highly recommends the following preparation, which is to be introduced between the glans and prepuce by means of a camel-hair pencil:

℞. Cerati simplicis, vel mellis,
Olei olivæ, aa. ʒj.
Hydargyri chloridi, ʒss.
Extracti opii, ʒj.
M.

If balanitis be attended by much infiltration into the cellular tissue of the prepuce, the serosity should be evacuated by several punctures with a lancet. If the patient can keep his bed, the penis may also be enveloped in a single thickness of linen, which is to be kept wet with cold water or diluted Goulard's extract, and exposed to the air. If, however, he continues his daily occupation, no benefit can be expected from such applications, which, when confined by the clothes, act like poultices and favor rather than prevent œdema. In all cases the cure of balanitis will be accelerated, if the patient be kept quiet and the parts elevated. When this disease is dependent upon the presence of a chancre, secondary eruptions or vegetations, these should receive their appropriate treatment.

With persons who have repeated attacks of balanitis it becomes an important object to take measures to prevent them. To accomplish this the strictest cleanliness should be enjoined. The parts should be carefully cleansed of all accumulation of their natural secretion twice a day, and, after doing this, they may be wet with an astringent lotion, as a mixture of equal parts of brandy and water with the addition of alum, or with a solution of tannin, or with any of the astringent washes already mentioned. It is also desirable to attend to the digestive functions, and to direct the diet to be simple. The influence of a long prepuce in producing relapses of this disease has already been referred to. I have sometimes succeeded in remedying this by directing the patient to keep his prepuce constantly retracted by means of a narrow bandage around the penis, posterior to the glans. If this be worn for a few weeks, the prepuce will often remain retracted without further assistance, and the mucous surface of the glans becomes hardened by exposure and friction. If this attempt prove unsuccessful, our only resort is the removal of the superfluous integument by circumcision.

CLINICAL REPORTS.

ACADEMY OF MEDICINE.

REGULAR MEETING, OCT. 5, 1859.—DR. WATSON, *President.*

YELLOW FEVER.

Dr. Griscom said:—On the present occasion, under the terms of the resolutions* before us, one only of the numerous points of this knotty subject is presented for discussion, and to that I purpose to confine my remarks. The resolution declares in effect, that yellow fever *is not personally communicable.* In its own language, it says, "in the absence of any evidence establishing the conclusion that yellow fever has ever been conveyed by one person to another." Mark the precision of the language—"evidence, *establishing* the conclusion."

We have had presented to us some evidence to the contrary, but it was declared by Dr. Benjamin Rush, just 60 years ago, after the epidemic of 1799 in Philadelphia, that "out of upwards of 1000 persons who have carried the disease into the country from our cities, there are no more than *three* or *four* instances to be met with of its having been propagated by contagion."

If so important a question is to be determined upon testimony so rare and disproportionate as this, where the witnesses *pro* are only three or four to the *thousand con*, surely we may be allowed to hesitate before deciding it against the liberty of the subject of the disease. But Dr. Rush was at that time a non-contagionist, and we may therefore be cautious respecting his statements. Yet if we examine the testimony adduced in favor of the personal communicability of the disease as furnished by its advocates themselves, we shall find it lacking in much that is essential to a

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* Whereas, The National Quarantine and Sanitary Convention, held in this city in the month of April last, adopted a resolution in the words following, to wit—

"*Resolved*, That, in the absence of any evidence establishing the conclusion that yellow fever has ever been conveyed by one person to another, it is the opinion of this convention that personal quarantine of cases of yellow fever may be safely abolished; provided, that *fomites* of every kind be rigidly restricted."

—Therefore, *Resolved*, That the opinion expressed in said resolution is concurred in and adopted by this Academy.

satisfactory solution of the question. Such an examination I do not propose now to make in extenso;—abler critics have passed their judgments upon the various items. But one point I may mention, as presented in the cases cited by that ablest of American contagionists, the late Dr. David Hosack, as worthy of special attention. I refer to the entire absence of any allusion to the possibility of *fomites* having had any part in the production of the disease in the cases quoted. In the instances referred to by Dr. Hosack in his paper on the "laws of contagion," in the transactions of the Literary and Philosophical Society, from Rev. Dr. Moore, and Dr. Caspar Wistar, this deficiency is most marked, and the personal contagious property of the disorder in those instances is assumed without any inquiry into the probability or even possibility of the clothing and effects of the patients having been the vehicle of the poison to others; and this too, though the patients had fled from infected districts after a residence long enough therein to have imbibed it into their own bodies, and may reasonably be presumed to have carried their clothing and other effects with them in their flight.

On the other hand there are strong grounds for the opinion, in the Germantown cases reported by Dr. Wistar, that clothing from the infected city might have been, or was, the vehicle of the disease; for it is distinctly stated, that the mother, whose daughter had lived in the infected portion of Philadelphia, and died of the fever in a few days after getting home,—that this mother, Mrs. Johnson, had "assorted the clothes of her deceased child," and afterwards took the disease and died. Now, although the case of this mother is accepted as one of personal contagion, the existence of the child's clothing *as fomites* is wholly ignored, and the same oversight occurs with regard to others who died at the same house about the same time.

Next to Dr. Hosack, perhaps the most ardent and unflinching of the advocates of the contagious property of yellow fever, is his pupil, our highly esteemed and most worthy associate, Dr. John W. Francis, our regard for whose personal and professional character demands for all he says the most attentive consideration. I would therefore occupy a few moments in paying my respects to one of the cases relied upon by him as evidence of the doctrine which he upholds. It is his own case which he has related to us upon this floor, and also before the late Quarantine and Sanitary Convention. That I may not mistake the case, I quote all that relates to it from the report of his speech before that convention, as revised by himself. It is as follows:

"Of the fever of 1795, I shall state my own individual case to illustrate its communicability. My father contracted the disease in October of that year, and died on the 23d of that month. The day before his death I was seized with the pestilence. I could never learn that the infected district had invaded that part of our city, in which was our residence, near the head of Pearl street, nor

that I had, as a child, aged six years, wandered at all from the premises. Personal communication about the sick-bed of my father had engendered the disease. I was informed that my prescriber was Dr. Wm. Pitt Smith, who died shortly after, of yellow fever. I narrowly escaped, and well remember my coffin set up in the corner of the room; for in those days of dismay the patient was scarcely dead before interment took place; you were hardly cold before the grave received you; such was the dispatch with all classes of citizens."

To this recital the same objection lies as against the others, that nothing is said about the *possibility* of the disease having been communicated from father to son through the clothing brought by the former from the infected district, where he doubtless imbibed the poison, which he carried home with him, and caused his own death.

So also the case, reported by Dr. Fenner (in the *Transact. Amer. Med. Association*, vol. vii., p. 539), which is the only one quoted by Dr. Dickson in the second edition of his *Elements of Medicine*, p. 274 in support of his opinion as to its contagiousness, in the following language: "A Mr. McManus, who lived on the hills of Hinds Co., more than 40 miles from Vicksburg, went down to that city and remained there several days in 1841, when it was severely scourged by epidemic yellow fever. Returning home he was soon attacked by yellow fever, of which he died after throwing up black vomit. A few days after his death, his wife, who had nursed him assiduously during his illness, and had not been away from home, was attacked in a similar manner, and died with black vomit and yellowness. Their residence was in a high and healthy locality, where yellow fever was never known to prevail. Now, it is evident," says Dr. Fenner, "that Mr. McManus contracted his disease in Vicksburg; but if *any one can doubt* that Mrs. McManus caught the same disease from him, I must *confess it is more than I can do.*"

Now here again nothing is said about the infected clothing or merchandise, which the patient carried home with him, and yet upon such *negative* testimony, Drs. Fenner and Dickson yield all doubts.

In illustration of the absurd extent to which the sentiment of the contagiousness of yellow fever will sometimes be carried, and as an offset to the case just given, I will quote the case of my own father, who was attacked in Philadelphia in the disastrous epidemic of 1793. He was pursuing his mathematical studies, when the disease appeared. I give his own account:

"I continued until no one but myself remained, and until my teacher himself was seized with fever and confined to his bed. He considered his recovery, I apprehended from the beginning, to be doubtful, and furnishing me with the outlines of his will, desired me to prepare it in due form. Having assisted him in signing it, and perceiving him to be very ill, I was induced, although very

desirous to remain with him and assist his wife in nursing him, to yield to their advice and leave the city. . . I embarked in a sloop for Alloway's Creek, and spent one night on the water, and on the following night I was seized with a heavy chill, followed by high feverish excitement, which was considered as an evident attack of the disease from which I had fled. My parents, eight miles distant, were informed in the morning of my situation, and no time was lost in sending for me.

"My situation excited much sympathy in the town of Salem (N. Jersey), where I was pretty well known, and the attendance of my physician, who resided in the town, was very assiduous, until the fears of the inhabitants for his and their own safety, laid him under a positive interdict, as I grew more and more ill, no longer to enter my room or to go inside of the house. The very atmosphere of our dwelling was considered to be infected, so that travelers along the road, apprised of my illness, would climb over the fences and make a wide circuit, to avoid the danger. But my physician, Dr. Rowan, though prohibited from seeing me, or coming to the house, continued his daily journeys to a tree, above a quarter of a mile distant, where he met my father, learned the symptoms, and prescribed what he thought best. The disease terminated in a dysentery, which being suitably treated, I began rapidly to recover, and was soon restored to health."

No other person in the house took the disease. Seeing, then, such omissions and admissions as these, may we not concur in the idea expressed in the resolution, as to the absence of evidence "*establishing* the conclusion that yellow fever has ever been communicated by one person to another." How *can* any one maintain the idea of contagiousness upon such evidence as this?

In the next place, I would present a single argument against the *possibility* of yellow fever being a contagious disease. This argument I have seen alluded to only in two works—that of Prof. Smith on Epidemics, and that of Dr. La Roche on Yellow Fever—and yet, in neither, in my judgment, is the argument pushed so completely to its conclusion as it appears capable of being, and it seems, to my mind, that had it been presented in its full effect, the mooted question might have long ago been settled.

To understand fully the nature of the argument, we must first know the real meaning and application of the word "contagion," as now generally received.

Whatever may have been the views of the earlier medical philosophers, as to the precise meaning to be given to the word, or however it may have been confounded with infection, the modern application of it is clear and precise. Nowhere, probably, shall we find a more distinct and comprehensive definition of it than in the first four lines of the body of the work entitled, "*Elements of the Etiology and Philosophy of Epidemics*," by Joseph Mather Smith, M.D. This definition is in the following words:

"*Contagion is a poison generated by morbid animal secretion,*

possessing the power of inducing a like morbid action in healthy bodies, whereby it is reproduced, and indefinitely multiplied."

Accepting this definition, we perceive, 1st, That it is a *secretion* (not a mere excretion), the product of a *living animal action;* 2d, That it is a morbid product, i. e., the result of a diseased action; and 3d, It possesses the power of inducing a like morbid action in healthy bodies, and of multiplying and reproducing itself.

Applying this definition to certain well known diseases—small pox for instance, or measles, or scarlatina—and we have a full and distinct comprehension of its different points. The virus of variola, whencever it came originally, responds completely to them all. It is a poison reproduced in and secreted by a *living*, not dead, or decomposed tissue; it is an animal and not a vegetable production; infused into a healthy body, it reproduces *small pox et præteria nihil.*

By the same author, contagion is contradistinguished from infection by applying the latter to the *product of the decomposition of animal and vegetable substances*, taking the same view of the distinction as did Dr. Richard Bayley, in 1796, and although other authors differ as to the most appropriate application of the word infection, some, as Wilson Philip, and Dr. Bateman, the supposed author of the article, "Contagion," in Rees's *Cyclopedia*, appropriating it to "the *act of communication* of the disease;" yet the definition of the word contagion, as given by Prof. Smith, is the almost universally accepted one, and, with few exceptions, the same may be said of infection, and is evidently the most free from objection.

But, to be the product of *decomposition*, the *vitality* of the decomposing substances must first be destroyed. No time need be spent in the elucidation of these points, since they have been ably discussed by some of the authors alluded to, and I content myself with the remark, that these definitions and distinctions appear to me to constitute the really correct interpretation of these pregnant words.

Let us, then, apply them to the case before us. The first question which arises is this: Admitting the broad distinction thus drawn between these two sources of disease, contagion and infection—the one the product of living animal action, the other the result of the decomposition of dead animal or vegetable matter, or of both combined—can these two classes of poisons, so distinct in their chemical and physiological characteristics, produce the same results, when absorbed into the healthy body? Are they convertible influences?

For example—can the *marsh miasm*, which is the source of intermittent fever, by passing through the living body, cause the elimination of a poison capable of reproducing itself, or the miasm which is the cause of the more pernicious remittent, from Panama and other parts of the Isthmus, which for several years past has crowded our hospitals, did it ever, or can it, by being distilled

through the animal alembic, generate a poison capable of producing the same disease in another? Every one knows to the contrary.

It may be stated as a medico-etiological axiom, that *two different and distinct causes cannot produce the same effect.*

Now, what is the original source of yellow fever? I say the *original* source—is it a secreted animal poison, generated by morbid animal action? On the contrary, it is universally accredited, even by the advocates of its contagious power, to a poison derived from vegetable putrefaction. By those who believe it to be exclusively an imported disease, as by those who consider it wholly of domestic origin, as well as by those who regard it as both exotic and indigenous, its original ultimate source is thought to be no other than vegetable decomposition, terrene exhalations, or both combined, aided and controlled by certain meteorological circumstances. Not one writer, within the range of my observation, has ever attributed it to an animal poison secreted by the living body, and probably not one could be found, even in the ranks of the most decided contagionists, to hazard the expression of an opinion to that effect. If, then, it has no other origin than vegetable putrefaction or terrene exhalations, it cannot, according to the axiom before announced, have any other source; and, furthermore, admitting, for the sake of the argument, that a body laboring under yellow fever produces any secretion, or aura, or poison in any shape (though this has never been proved), that poison has a living animal, and not a dead vegetable origin, and it cannot produce the same disease as the original poison produced; and it must, therefore, if anything, produce something *different from yellow fever*, which is a specific disease, the result of one specific cause—*Quod erat demonstrandum.*

Such, Mr. President, is, I think, the true philosophical basis upon which this question should be discussed. If the principle which I have stated, viz., that two different and distinct causes cannot produce the same disease, is not merely an apothegm, but has the force of an axiom, as I claim for it, then there is an end to this long waged dispute respecting the contagious property or capability of yellow fever.

NEW YORK PATHOLOGICAL SOCIETY.

REGULAR MEETING, SEPT. 14.—DR. DALTON, *President.*

Reported for the New York Journal of Medicine.

BY GEORGE F. SHRADY, M.D.

Rupture of the Aortic Valves.—Dr. Sands presented the heart of a policeman who died yesterday afternoon. Four weeks ago he received injuries, supposed to have some connection with his death.

It appears that four weeks ago last Saturday night, he was attacked by a person whom he was endeavoring to arrest, and very severely beaten. Notwithstanding the injuries, he made good his capture. After this he remained on duty for forty-eight hours. He then complained of pain in his chest, and was allowed to go off duty, and was attended by Drs. Fisher and Wells, Police Surgeons. No disease could be diagnosed, except general injury of the chest. Ten days after that there were signs of pleuritic inflammation, and a systolic murmur could be heard in the region of the base of the heart. The pulse at this time was about 80; it continued not less than 80, and towards the last week increased to 135–140. During the last few days, however, the pulse was so rapid that it could not be counted. The man died last evening. Death was preceded by fever, a high pulse, and pretty constant, though not uninterrupted dyspnœa.

On examination of the chest a large amount of serous effusion was found in the pleural cavity; the lungs compressed. The pericardium contained two or three ounces of serous fluid. The principal lesion was found in the aortic valves. Upon examining the specimen, it will be seen that but one of the valves remain intact. Of the other two valves, one is almost entirely gone; the other has a large rent, extending through nearly the whole of its length; near the margin it is unbroken and has its ordinary aspect. The other valve, that one opposite the right coronary artery, is the seat of fibrinous deposit. The endocardium in the vicinity is torn.

There is very little doubt that the rupture took place at the time the man received the injuries, thus indirectly leading to his death.

Rupture of Chordæ Tendinæ.—Dr. Dalton related a case, very interesting in this connection, where a rupture of the tendinous chords attached to the anterior fleshy columns took place. The patient was a man about forty years of age, tall and spare; his previous history being unknown, as he was a stranger in the city. He was found unconscious in bed. Dr. Budd saw him first; breathing stertorous; pulse however had some force. Death took place some three hours after the attack. On applying the ear to the præcardium a bellows murmur was found, loudest at the base; throbbing of the carotids well marked.

The post-mortem examination revealed extravasation of the blood on the *surface* of the brain. No calcified arteries could be discovered in the brain. The heart contained no clots, or fibrinous material. The cavities of the right side were distended with liquid blood. The whole organ showed nothing abnormal but the above lesion—*rupture of the chordæ tendinæ.*

A similar case was related by Dr. Clark, where rupture of the tendinous chords had been suspected some weeks before the patient died, and was verified by the autopsy.

Remarkable Case of Adipocere.—Dr. Dalton presented a body which had undergone complete transformation into Adipocere. As far as could be ascertained the body was buried in 1832. It was found in a cemetery, or rather a pit in the upper part of the city, which was dug out for the reception of cholera patients. The bodies were placed in separate coffins, but not in separate graves. The coffin containing this body was found about twenty feet beneath the surface; underneath it there were three tiers of coffins, and above it nine or ten. The uppermost tier of coffins was covered by three or four feet of solid earth. The soil directly under the coffin in which the body was found, was very watery; above this level there was but little water, although the ground was very moist. The bones of the bodies contained in this pit, and in some cases the tendons were melted together in a semi-fluid mass, the usual result of decomposition under ordinary circumstances.

At the water mark there were several bodies converted into this Adipocere. The specimen presented, however, was the most perfect. The hands and feet have been rattled off during transportation. When the body was first taken out, its color was almost precisely the same as now—(a dullish white)—if anything, it has become a little more brownish. It has now been exposed to the air for three months. Its consistency was decidedly less, when first removed; it was then like cheese of medium consistency, a mixture of the ductile and the brittle. In handling it great care had to be used. At that time it exhaled a tolerable strong odor, partly cheesy, ammoniacal and earthy. Since that time the cheesy and the earthy odors have disappeared; the ammoniacal smell, however, is still perceptible. In other respects it appears not to be altered in the least, and Dr. Dalton presumes it will remain in the same condition for years, for centuries, if properly taken care of.

The body is that of a large fat woman, between 45 and 50 years of age, evidently a woman past the prime of life. The anterior parietes have sunk very much, particularly those of the abdomen, which appear to be in contact with the spinal column. The anterior portion of the chest is also collapsed. The change of animal tissue to the Adipocere is absolutely complete in all the tissues, except the hair, nails and bones. The papillæ of the skin can be distinguished, but the other tissues cannot be made out.

The substance of which this mass is composed is known by the name of Adipocere, or as the French call it, "*graisse de cadavre,*" (fat of dead bodies.) It is exceedingly light, so that one can easily raise the whole subject.

It is somewhat curious that all the bodies which are reported as having undergone this degeneration, have been interred under precisely the same circumstances. The first case was observed in a similar pit at a cemetery in Paris.

The chemical composition of the substance is such, that it is regarded as an ammoniacal soap, sometimes soap composed of ammonia and lime, in other instances almost exclusively a lime-soap.

Orfila and Fourcry, who had paid particular attention to this subject assert that at first it is almost exclusively ammoniacal, the ammonia being supplied by the decomposition of the nitrogenized muscular tissue. This unites with the fat coming from the adipose tissue, which has become rancid, and produces an ammoniacal soap. Some French chemists regard it as a transformation of the muscles into oleic acid, so that Adipocere may be produced by simple decomposition of the muscular tissue. The more generally received opinion is that it is simple decomposition of the muscular tissue into ammonia, which unites with the fat of the adipose tissue. This opinion is favored by the fact, that in almost every instance of this kind the bodies are those of extremely fat persons. Such was the fact in a case, the only case of this kind which Dr. Dalton has previously seen, where the body was that of an enormously fat man. Another reason which makes it probable that the fat must come from the adipose tissue is that as Orfila ascertained, Adipocere does not take place, when the animal matter consists of muscular tissue only.

A body buried by *itself* will rarely be converted into Adipocere, because the ammonia compounds produced by the decomposition of the muscular substance are dissolved in the fluids of the body, and these fluids absorbed by the soil, and do not unite with the fats so as to form Adipocere. But if a body is surrounded by other bodies, the bodies above decomposing, produce ammoniacal fluids. These being washed down by the rain, filter through to the ninth or tenth coffin, the water of course in its descent becoming more and more loaded with ammonia, and this uniting with the fat of the lowermost bodies, produces Adipocere. The bodies under the surface of the water do not undergo the transformation, probably because the substance is soluble in water.

THE NEW YORK HOSPITAL.

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LATE RESIDENT SURGEON.

Amputations, 8—*Thigh*, 2; *Leg*, 2; *Arm*, 1; *Ankle-Joint*, 2; *Shoulder-Joint* 1.—*Trephining*, 4—*Vesico-Vaginal fistula*—*Lithotomy.*

I shall confine myself in this report to the service of Dr. John Watson, for the months of April, May, June and July, in the first surgical division. During this time a number of cases have presented themselves, which, though by no means rare, are eminently practical.

There have been performed by Dr. Watson 14 capital operations, which may be classed as follows: 8 amputations, 4 cases of trephining, Sims' operation for vesico-vaginal fistula, and one case of lithotomy. There have been two or three interesting and important cases which are necessarily omitted in the present report.

Case 1—*Compound fracture of leg—amputation of thigh.*—Ellen S., 38 years of age, was admitted April 13, 1859, with a compound fracture of the right leg, caused by a fall down stairs. The opening, which was situated on the inner side of the leg, at the junction of the middle and lower thirds, was barely large enough to admit the end of the little finger, neither was the fracture itself very extensive. Were it not for the presence of two serious complications the limb might have been saved. In the first place, the posterior tibial artery was found to be ruptured, and in consequence the tissues of the limb became very tense from the effused blood. Secondly, the patient suffered from a rigid anchylosis of the knee-joint, which was flexed at a very inconvenient angle for the proper adjustment of the limb in a fracture box.

Amputation of the thigh was performed a short distance above the knee-joint, in consequence of the existence of the anchylosis referred to. The circular or conical method was adopted. The edges of the stump were brought together and strips of adhesive plaster applied, but as usual the sutures had to be removed at the end of a few days to allow the escape of sero-purulent fluid, and the stump was left open to heal by granulation. The patient improved from that time, the cavity filled up with exhuberant and healthy granulations under the influence of the stimulating dressings, and she was discharged cured on the 25th of July with a very handsome and serviceable stump.

In this case as in all other amputations of the thigh, if such a thing is possible, Dr. Watson always operates low down, for the reason that the periosteum in the lower third of the thigh is more firmly attached to the bone, and is not so apt to be stripped off, thus preventing the occurrence of necrosis. The space chosen is limited by the situation of the aponeurotic canal for the femoral.

Case 2.—*Compound fracture of ankle-joint—amputation.*—Daniel S., aged 35, was admitted with the above-mentioned injury, on the 12th June. A short time previous, while standing upon the rail track in a state of partial intoxication, a train of cars ran over him, causing him to sustain severe laceration of the left foot and ankle. On admission amputation was immediately performed at the place of election. The patient did well up to the end of the fourth day, when symptoms of pyæmia developed themselves, from which he died seventeen days after.

Case 3.—*Caries of ankle—amputation of leg.*—R. K., aged 21, entered the Hospital April 25th. Nine months previous he first noticed a pain and slight swelling of the right ankle, which interfered very little if any with his powers of locomotion. He ac-

counted for it by supposing it was rheumatic in its origin, inasmuch as he could not refer it to any injury that he had received. This pain and swelling subsided after awhile, and the joint remained perfectly supple for the space of two months after, when he suffered from another like attack. The pain or swelling did not disappear, but began rather to grow more severe, and give him considerable trouble. Three months after the second attack an abscess formed over the internal malleolus, followed by a second one a short time after upon the opposite side in nearly the same situation, and also one to the inside of the tendo achilles. Each one of these abscesses left a sinus which communicated with bare bone. As the disease progressed the tissue around the joint became very œdematous ; and lastly the joint itself became secondarily involved in a sub-acute inflammation. This debilitated the patient to such an extent that there was but one thing to be done, and that was amputation. The leg was taken off at the place of election by the circular method, after which everything went on finely ; the patient's health showed signs of improvement from that time, and at the end of six weeks after the amputation, the parts healing by granulation as a matter of course, he was discharged cured.

Case 4.—*Compound fracture leg—amputation of thigh.*—Jas. L., aged 30. Just previous to admission he sustained a severe compound fracture of the right leg by the falling of a derrick. The seat of injury was at the junction of the lower and middle thirds ; the soft parts were very much lacerated, the posterior tibial could not be felt, and there was besides a great quantity of effused blood into the knee-joint, which determined the operator to cut above parts that would be to apt to give trouble if allowed to remain. The amputation was performed in the ordinary manner. The edges were brought together by sutures, and some point of the flap healed by first intention, while the remainder soon closed over, so that the patient was able to be discharged about six or seven weeks after his admission.

Here, to save a too frequent repetition I will state that Dr. Watson always amputates limbs by the conical or circular method, as he is satisfied that such a practice is attended with the best results. This conclusion he has arrived at after giving the flap operation a fair trial.

Case 5.—*Compound fracture of the wrist—Amputation of arm.* —L. E., æt. 54, was admitted on 18th April with a severe injury of the wrist of right side, caused by a circular saw. On examination there was found a wound which extended from the metacarpo-phalangeal articulation of the thumb, on its palmar aspect over the dorsum of the joint as far as its middle. The ossa semilunare and scaphoides were cut through, and the cavity of the joint entered. There did not seem to be much loss of sensation of the hand. The power of extension of one or two of the fingers was lost on account of the division of some of the extensors.

The radial artery was found to be divided, but the hand was not decreased in temperature. Taking everything into consideration the patient being of good constitution, and the wound being a clean cut, an attempt was thought proper to be made to save the hand by placing the forearm upon a splint, keeping everything quiet, and combating inflammation. The sequel, however, showed this to be of no avail. Abscesses formed in the neighborhood of the joint and burrowed in every direction, and the joint itself became the seat of destructive inflammation. This condition of things soon put to flight any idea of saving the hand, and it was accordingly removed by amputation through the middle of the forearm four weeks after the patient's admission. One-half the stump healed by first intention.

Case 6.—*Amputation at the ankle-joint—Symes' operation.*—Dr. Watson also performed two amputations at the ankle-joint according to Symes' method. The first, Margaret K., æt. 23, injured the right-foot by its being caught and jammed between a ferry boat and the dock, causing an extensive wound of the dorsum and compound comminuted fracture of the metatarsal bones. The amputation was performed shortly after admission in the usual way. a good flap was formed, the parts healed nicely and left a perfect stump.

The second was the case of a boy about 8 years of age, whose left foot was run over by a large truck. The sole was torn up by a wound which extended from the ball of the great toe to the heel, and the metatarsal bone, of the great, second, and third toes were badly crushed. The patient had a somewhat protracted stay in the house on account of the occurrence of Hospital gangrene in the stump, but at last was discharged cured, with a stump which if not a very handsome one, answered every purpose. The sutures of course had to be removed, and the flap after the separation of the slough was carefully moulded by strapping with adhesive plaster, very much to the credit of Dr. Bell.

Case 6.—*Amputation at the Shoulder-joint.*—The last but not the least of the amputations performed by Doctor Watson was a shoulder-joint operation upon a patient 29 years of age, with the following history: Pat. S., while in a state of intoxication, jumped from a train in motion and alighted upon a steep bank, rolled back, the wheel of the hind car passing over him causing the following injuries: an extensive scalp wound, a compound comminuted fracture of the left os brachii, extending from the elbow, which sustained a compound dislocation, to within a few inches of the shoulder-joint; a fracture of the sternum about its middle, fracture of eighth, ninth, and tenth ribs of left side, together with a compound fracture of the leg of that side. Reaction being sufficiently established the day after, and amputation of the arm being imperiously demanded, the operation, in consequence of the laceration of the soft parts which at one point extended into the joint itself, was performed at the shoulder, the double flap was

resorted to, and notwithstanding the patient lost but very little blood, he had not sufficient vitality left to survive the shock, and died the same evening.

Case 7.—*Compound fracture skull—Trephining.*—Abraham W., æt. 52, fell down a hatch a distance of twenty feet, sustaining a fracture of the skull. When brought to the Hospital he was suffering somewhat from compression. A contused wound was discovered about one and a half or two inches long, posterior and superior to the left ear ; and a portion of bone at that point was found to be depressed. The patient with as little delay as possible was taken to the operating theatre, where the wound being enlarged, there was found an abrupt ovoid depression of bone three-quarters of an inch long by half an inch in breadth. The three-quarter inch trephine was applied, and the fragment was removed ; the edges of the opening being gnawed smooth by the rongéur. This instrument in all such cases is found to be very serviceable, and where it can be well applied, through an opening already in the skull it is often substituted for the trephine itself. Under those circumstances I am inclined to believe that the dura mater escapes being injured much more frequently, besides it is an instrument as far as I am able to judge that can be used with more *certainty than the trephine*. The dura mater in this case was not wounded. The amount of depression was about one line. The patient after the operation gradually waked from his slumber, and in the course of twenty-four hours was able to answer questions intelligibly. He continued to do well, to sleep comfortably at night, pulse ranging from 85 to 100, suffering only from time to time with a slight headache, until the 28th day after admission, when he was seized by a slight convulsion on the side of the face opposite the injury. This passed off after lasting but a few moments, but recurred again the fourth day after, when he became slightly delirious, nothing of note occurred until a month after that, if we except an occasional slight headache, when he was seized one day about noon with severe convulsions of left side of body, which lasted with short intermissions for five or six hours, during which time he became comatose ; leeches were applied to the head, stimulating injections administered, sinapisms to feet, but despite all the patient sank and died that evening.

The post-mortem examination showed that the cause of death was due to inflammation of the meninges of the right side of the brain, as was evinced by a very considerable thickening of the dura mater, the presence of subarachnoid effusion, and injection of vessels of the piamater. There was also found a thin clot which nearly covered the whole external surface of that hemisphere.

Case 8.—*Compound fracture of skull,—trephining ; recovery.*—John M., æt. 21, has the following history: About five o'clock in the afternoon of May 30th, patient was struck on the back part of the head by a piece of iron weighing seven or eight pounds, which was detached from a broken windlass, and had a fall of fifteen feet.

On the receipt of the injury patient was stunned, but ten minutes after was perfectly sensible. Half an hour after admission, he was able to give an account of the accident. There were then no symptoms of concussion, no paralysis of the limbs, no irregularity in the pupils, and the pulse was normal. A wound was found to be situated postero-superior to left parietal eminence an inch long, and communicating directly with an abrupt depressed portion, about two or three lines in depth, which covered an area equal to that of the thumb nail. The patient passed a very comfortable night, and at noon, the following day, in order to anticipate trouble, he was trephined. The trephine was first applied, the depressed portion raised, and, afterwards, the *rongéur* was brought into requisition. The dura mater was found to be injured, to the extent that would admit of an introduction of a probe. The case needs no further detail. The remainder of the case can be told in a few words ; he entirely recovered without a single unpleasant symptom.

Case 11.—*Compound fracture skull—trephining.*—L. M., 30.—Patient in an altercation with another, was struck upon the left side of the forehead by a cartrung, leaving a contused wound in that side, extending from the external frontal angle obliquely upwards and inwards, nearly as far as the median line. On examination of the wound after admission, a depression was found to exist. Patient was somnolent, pulse 70, and there was a good deal of ecchymosis of both lids. He had suffered from epistaxis previous to his admission.

At the operation, which was performed immediately, the wound was enlarged, and disclosed the existence of a stellated fracture, involving the frontal bone. The trephine and *rongéur* were brought into play, and the fractured portions were removed, leaving an opening in the skull wall three inches long, by one and one-half wide. The dura mater was found to be lacerated to the extent of half an inch, and through this opening a small quantity of lacerated and softened brain substance protruded. During the performance of the operation, a line of fracture was discovered to extend towards the orbit. This, taken in connection with the occurrence of epistaxis previously, looked towards an unfavorable prognosis. The lips of the wound were brought together in the usual way by adhesive straps, and cold water was applied to the part. The day after the operation, the patient was quite rational, notwithstanding he complained of some pain in the head. These symptoms continuing, the next day leeches were applied to the wound, but the symptoms increased, and he began to grow lethargic. The third day after the operation, paralysis of right side began to show itself. The fourth day, the left leg became paralytic, and towards evening he was seized with a series of convulsions, which terminated in death the day following.

I make the following extracts from the post-mortem examination by Dr. Hull. The opening in the frontal bone extended from the

external angle, terminating in the median line two inches above the root of the nose. The laceration in the dura mater was large enough to admit the end of the finger. The dura mater of the left hemisphere was very opaque, and much thickened; underneath the arachnoid there was a layer of lymph, which extended over nearly the whole surface of that side of the brain. The brain substance at the site of the wound, was very much lacerated, and there was a good deal of loss of substance.

The brain being removed, the fissure extending downward before referred to was found to extend, as was supposed, through the orbital plate into the base of the skull. This fissure extended backward to the foramen lacerum anterius, thence across base of the skull to the opposite side. A line of fracture was also discovered to extend from the upper extremity of the opening in the skull towards and through a portion of the ethmoid bone, which accounted for the occurrence of epistaxis.

Case 12.—*Compound fracture of skull—recovery.*—Thos. F., æt. 19, was admitted August 12, 1859, with the above injury, which, he said was caused by the falling of a piece of rock against his breast, while at work in the Bergen Tunnel, and throwing him back upon his head. He, by all accounts, seems to have been perfectly conscious after the accident, and suffered in no way from concussion. On examination of the head, a wound of the scalp was discovered, which communicated with a fracture of the skull just above the occipital protuberance. This fracture was situated in the median line, and was, for the most part, linear in character, though, at its lower portion, it curved upon itself, forming a dent in the skull wall, covering an area of a ten cent piece. The depression was well marked, but *not abrupt*, and it was decided best, to leave the case without an operation, and watch for *grave* symptoms—a wise conclusion; the patient recovered entirely, and left the hospital a month after. The treatment consisted of absolute quiet, and free depletion.

Dr. W. is a strong advocate for depletion, by general and topical bloodletting in head cases, and, more especially, when the slow pulse is present, and certainly the results which attend such a practice are very gratifying.

Case 13—*Vesico-vaginal fistula—Sims' operation.*—Bridget M., aged 30, was admitted into the Hospital, the 17th of May, with a vesico-vaginal fistula, which she stated she first noticed about a year before, a short time after the birth of a large female child. The labor, according to her account, was a severe and tedious one, and it was found necessary to apply the forceps. From the time she first became aware of the existence of the unatural opening, she does not recollect to have passed her urine through the urethra. On examination there was discovered a transverse fistula in the median line, about one inch posterior to the meatus urinarius. An attempt was made to introduce the catheter through the urethra, which, after considerable difficulty, succeeded—this was

supposed to be owing to an occlusion of the vesical orifice by a valve-like projection of the mucous membrane at that point becoming adherent consequent upon the previous injury to the parts. This obstacle being overcome, allowed the passage of Sims' catheter, after which the urine passed in the natural direction.

The sixth day after admission Sims' operation was performed. Some fringe-like granulations which surrounded the fistula and hung into the cavity of the vagina were reduced, the patient being placed in the position recommended by Dr. Sims, and his speculum used. The edges of the opening were brought together by four silver sutures, and secured in a way familiar to every one. A Sims' catheter was then introduced, and the patient urged to refrain from lying upon her back. The sutures were removed at the end of a week, but the parts were so slightly adherent that the fistula opened itself at the end of another week and necessitated the performance of the operation a second time, some two or three weeks after. Three silver sutures were this time introduced and secured by clamps as in the previous operation. At the end of a week, the sutures were again removed, the edges were found to have united firmly and completely. Shortly after this the patient was discharged cured.

Case 14.—*Vesical Calculus—lithotomy.—recovery.*—Wm. R., aged 26, entered the Hospital with a swelling of the scrotum, and an inflammation of the right epidydimis, which was the result of a very long walk he had taken a day or two previous. He was treated for this for a considerable length of time, during which it was ascertained that he had symptoms which looked like the existence of stone in the bladder. About two years previous to his admission he suffered from what seemed to be cystitis, the result of a somewhat protracted exposure to cold. The severity of the symptoms soon abated, but he suffered from frequent micturition. With the sound the presence of a calculus was clearly made out. When the inflammation of the epidydimis subsided he was prepared for the operation of lithotomy.

The patient being etherized, he was placed in the usual position. A grooved staff, with a blunt extremity, so arranged as not to slip off into the bladder was introduced into the urethra. The bilateral incision was made externally, while an incision was made through only one side of the prostate. The stone was then withdrawn, the finger being used as a director. This is the mode of operating preferred by Dr. Watson, who maintains that the incision gives a sufficient amount of space for the removal of almost any stone, if not, the other side of the gland can easily be divided. Besides, the transverse muscles of the perineum and all the large vessels are avoided. The wound healed readily and without deformity. The stone was oblong, 2½ inches in length by 1¼ in breadth, and weighed 1 ounce and 130 grains. It presents the gross appearances of the triple phosphate composition, and on being sawn open, there is discovered in its centre what appears to be a piece of cedar, about the diameter of a crow quill, 1½ inches in length, which formed the basis of the formation.

PART SECOND.

CRITICAL ANALYSIS.

A Practical Treatise on Enteric Fever; its Diagnosis and Treatment; being an Analysis of One Hundred and Thirty Consecutive Cases, derived from Private Practice, and Embracing a Partial History of the Disease in Virginia. By JAMES E. REEVES, M.D. Philadelphia: J. B. Lippincott & Co., 1859, pp. 199.

IT has always been a matter of regret, that country practitioners do not more often publish their observations upon the diseases prevalent in their localities. Our knowledge of certain epidemics must be derived principally from this source. Erysipelas, continued fever, dysentery, diphtheritis, and other diseases which often prevail in the rural districts, present to the intelligent observer such a detail of circumstances as to enable him to determine with great precision interesting points—the subject of controversy. Among the questions thus submitted to the country practitioner, is the manner in which certain epidemics spread, whether by contagion, infection, or the constitution of the air; the influence of locality upon the type of the disease; the causes which give rise to complications.

The author of this work, a practitioner in the northern part of Virginia, has ventured to publish his observations based upon one hundred and thirty cases of typhoid fever, as they occurred in his vicinity, but deems it proper, in the preface of the work, to apologize for his presumption. For reasons already given, we think his apology unnecessary, and we welcome his work all the more heartily, that it emanates from such a source.

Passing over the first four chapters, which relate principally to the symptomatology, symptoms, and lesions of typhoid, or as our author terms it, enteric fever, we find an interesting history of this disease in the various sections of that State. In Eastern, and South-Eastern Virginia, it seems to have supplanted the bilious-remittent, within the last twenty-five years. In the more Northern counties, its first appearance was later, and is now the more common form of fever, prevailing as an epidemic, frequently with great severity. The question of contagion is variously answered by the physicians of Virginia, though Dr. Reeves does not hesitate to declare his firm belief of its contagiousness. In proof of the correctness of his views, he gives an account of the origin and progress of the fever in Barbour county. The first case was a man from Athens, Ohio, who was brought home sick of a "slow-

fever;" in three or four weeks, the mother, father, and three brothers, had the fever, and from this household, it spread to other families. The instances given to illustrate the contagious nature of this fever, are very striking, and we think, conclusive, having been personally cognizant of similar facts.

Of the mild form a majority of cases terminated between the thirteenth and eighteenth days; of the intermediate form, between the eighteenth and thirtieth days; the malignant form about the same as the last. One case continued sixty days, and terminated in recovery.

The rules prescribed for treatment are judicious, and give evidence of much experience. Veratrum viride, as a sedative, has proved very serviceable in the practice of Dr. Reeves.

In taking leave of this work, we commend the example of the author to country practitioners as worthy of imitation.

Anatomy — Descriptive and Surgical. By HENRY GRAY, F.R.S. Lecturer on Anatomy at St. George's Hospital; the Drawings by H. V. CARTER, M.D., late Demonstrator of Anatomy at St. George's Hospital. The Dissections jointly by the Author and DR. CARTER; with three hundred and sixty-three engravings on wood. Philadelphia: Blanchard & Lea, 1859, pp. 754.

THIS work is designed "to furnish the student and practitioner with an accurate view of the anatomy of the human body, and more especially the application of this science to practical surgery." To facilitate reference, the engravings are lettered, so that the name of each anatomical part appears in full upon it, giving in fact a perfect view of the anatomy of the human body. These engravings, which form the distinctive feature of the work, and, in our opinion, its chief excellence, are entitled to the highest commendation.

While it is true that anatomy is best studied upon the subject, and that the best anatomist always refers to actual dissection when in doubt, it is equally certain that a rough diagram often gives to the student an accurate and permanent impression of relative anatomy, and that the best teacher of anatomy is he who relies much upon diagrams to illustrate his lectures. Again, the practitioner is often entirely deprived of opportunities for dissection, and must confirm and correct his knowledge obtained by former dissections, by reference to accurate anatomical plates. In this view, we regard the work of Mr. Gray, as far better adapted to the wants of the profession, and especially of the student, than any treatise on anatomy yet published in this country. It is destined we believe to supersede all others, both as a manual of dissections, and a standard of reference to the student of general or relative anatomy.

To enable the student to apply his anatomical knowledge to practical points in surgery, the author has introduced under each

sub-division of the work "such observations as show the necessity of an accurate knowledge of the part under examination." These notes will prove of great service also to the practitioner who may desire to refresh his memory upon points of practical interest.

The general appearance of the work is highly creditable to the publishers. The typographical execution is unexceptionable, and the engravings are for the most part elaborately finished.

Notes on the Surgery of the War of the Crimea, with remarks on the treatment of gunshot wounds. By GEORGE H. B. MACLEOD, M.D., F.R.C.S., formerly Surgeon to the Civil Hospital at Smyrna, and to the General Hospital in Camp before Sebastapol. London: John Churchill, 1858, pp. 439.

THE War of the Crimea was in many respects the most remarkable in the annals of the human race. At a time of profound peace throughout the world, the most powerful and highly civilized nations array themselves for deadly conflict.

All that past experience could contribute to military tactics and stratagem, all that science has demonstrated in the use of deadly weapons, and all the methods that human ingenuity has devised for the destruction of life, were brought to bear upon the issue of this war with fearful energy. The nations of the earth beside were silent spectators of this mighty contest. The struggle came —the earth trembled with the gigantic tread of contending armies—the rivers ran red with human blood,, and human corpses strewed the plains and filled the valleys of the Crimea, fertilizing forever its sterile soil. Peace was restored, and that eventful struggle passed into the silent page of history. There are historians, not a few, who will record with minuteness and fidelity the battles lost and won, and trace with due discrimination the present and future consequences of this war upon the destinies of the contending nations.

But in the volume before us, we can alone learn at what expenditure of human life and human happiness this war was carried to its termination. If we mistake not, the medical historian alone can point the true moral of that war, and establish the true basis for the speculative statesman to form a just estimate of the advantages gained and lost.

The work of Dr. Macleod presents the medical history of the Crimean war with apparent accuracy and truthfulness; commencing with the history and physical characters of the Crimea, its climate and geology, it traces the war from the first landing of the troops to the fall of Sebastopol. In the first part of the work we have vividly portrayed the incompleteness of the medical arrangements of the army, the inefficiency of non-medical officials, and the disastrous results which followed. Although disease in its multiplied forms always proves far more fatal to armies than actual conflicts, in the Crimean war the per centage of deaths from this

source was excessive. Frederick the Great said that fever alone cost him more men than seven pitched battles; and it has been estimated that during a campaign there will be about 10 per cent. sick. But it is recorded, to the shame of the British government, that in the Crimea, while the army was stationary, in a comparatively healthy climate, having its communications open, and within a few miles of the sea, the per centage of sick to strength rose to 39 per cent., for the whole body of infantry, to 45 per cent. for the troops serving in front, and for eight corps to the unheard of number of 73 per cent. This excessive sickness is attributable for the most part, to the deficient supplies of the common necessaries of life in the early part of the war. Food, clothing, fuel, etc., were stupidly withheld by non-medical officials at the most critical period, and the foundation was laid for such diseases as scurvy, cholera, typhus, dysentery—which afterwards devasted the army.

This total disregard of the comfort and health of the troops by officers in command, of which we have given an example, extended to the most minute particulars. In the location of the camp, in the arrangement of tents, in everything, indeed, that pertained to the physical well being of the soldiers, we find the same culpable ignorance or negligence.

The details of this portion of the work, reflect most discreditably upon the military system of England, which ignores its medical officers, except in the mere treatment of diseases. That government has yet to learn that in the health of its armies lies their true strength, and to maintain this, military hygiene as a branch of study must be pursued by its medical officers—*to whom should be intrusted all matters pertaining to the health of the individual soldier.*

The subsequent chapters of this work are replete with interest to the surgeon. The statistics of the wounds, operations, and surgical diseases of the army, with the remarks by the author, render the volume one of great practical value.

The style of the author is worthy of commendation, the narrative being concise, and the description graphic.

Pathological and Practical Observations on Diseases of the Alimentary Canal, Œsophagus, Stomach, Cœcum, and Intestines. By S. O. Habershon, M.D., London, Assistant Physician to Guy's Hospital, &c. Philadelphia: 1859, pp. 312.

The literature of the physiology and pathology of the alimentary canal, has been enriched by the writings of some of the most able and experienced physicians of London. Alderson, Jones, Budd, Chambers, and Brinton, have added largely to our practical acquaintance with the physiology and pathology of digestion. To the list of authors mentioned, we now add another, Dr. Habershon, who is already know by his publications in Guy's Hospital Reports.

This work is divided into sixteen chapters, embracing the following subjects :—Disease of the œsophagus ; functional and organic disease of the stomach ; diseases of the duodenum ; enteritis ; strumous disease of the alimentary canal ; diseases of the cæcum and appendix ; diarrhœa, colitis, and dysentery ; typhoid disease of intestine ; colic ; constipation ; intussusception ; intestinal worms ; perforation ; fæcal abscess.

The *diseases of the œsophagus* are treated of minutely under the division of the causes of dysphagia, and with illustrative cases of each separate disease. Dysphagia may thus occur from cynancha tonsillaris, laryngeal disease, inflammation of the cellular tissue of the neck and mucous membrane, paralysis of the muscles, spasmodic stricture, and structural obstructions in the tube.

The organic and functional diseases of the stomach are very fully considered, the former embracing inflammation, suppuration, and ulceration of the coats of the organ and cancerous affections, and the latter the various forms of dyspepsia. The statistics of Mr. Brinton have thrown considerable light upon the organic diseases of the stomach, as perforating ulcer and cancer. According to him the former disease is twice as frequent in the female as male, while the reverse is true of cancer ; in females the perforating ulcer occurs between the ages of fourteen and thirty, but in males, between fifty and sixty. Several very interesting and instructive cases are given to illustrate the history and termination of these affections.

The *Duodenum* is subject to congestion, ulceration, mechanical obstruction, and gastric solution. But these conditions are not easily determined before death, owing to the complications which exist.

Muco-enteritis and enteritis form the subject of the next chapter, the former term applying to those cases in which the inflammation extends along the mucous membrane without involving the other coats ; the latter to those cases in which the inflammation implicates the muscular and peritoneal coats. Muco-enteritis in the child, is regarded by Dr. Habershon as infantile remittent fever, an opinion which he leaves unsupported by facts.

Strumous Disease of the Alimentary Canal, is considered under the following heads :—Diarrhœa in strumous children ; disease of the mesenteric glands ; tubercles in the peritoneum and strumous peritonitis ; disease of intestine in phthisis pulmonalis. This is one of the most practical chapters in the work, and will repay careful study.

The Diseases of the Cœcum and the Appendix Cœci, form the subject of chapter VII. These affections derive their chief importance from the great obscurity of their early symptoms, and the too often fatal termination in which they issue. The cæcum is liable to congestion, inflammation, ulceration, and perforation. The diagnosis of these conditions is rendered very obscure by

the more frequent occurrence of disease of the right kidney, caries of the vertebræ, iliac abscesses, &c. For the same reason the diagnosis of perforation of the appendix vermiformis is often extremely doubtful. Much attention has recently been given to these diseases, and several valuable monographs have been published. Dr. H. has added a number of cases, some of which are of great interest.

The remaining chapters on diarrhœa, colitis and dysentery, colic, constipation, internal strangulation, carcinoma, intestinal worms, and perforation of intestine from without, abound with practical matter and a large number of cases accurately related under each head.

From the brief notice which we have given of this work, it will be seen that the author presents us with a complete treatise upon the diseases of the alimentary canal. Notwithstanding the valuable works of Budd, Chambers, and Jones, which have seemed to cover this entire ground so completely as to leave nothing to be desired, we cannot forbear to commend the volume of Dr. Habershon, as an excellent clinical guide which the practitioner will find in some respects superior to those mentioned. Especially is this true as regards the succinctness of style and subject, and the large number of accurately reported cases.

A System of Dental Surgery. By JOHN TOMES, F.R.S., Dentist to the Dental Hospital of London, and to the Middlesex Hospital. With Two Hundred Illustrations. Philadelphia: Lindsay & Blakiston. 1859. pp. 686.

A Practical Treatise on Operative Dentistry. By J. TAFT, Professor of Operative Dentistry, in the Ohio College of Dental Surgery. With Eighty Illustrations. Philadelphia: Lindsay & Blackiston. 1859. pp. 383.

THESE works, though alike devoted to Dental Surgery, are very different in their design and scope. The treatise of Mr. Tomes is a thoroughly scientific investigation of the growth and development of the teeth, and the diseases to which they are liable. Nearly half of the volume is devoted to teething, in which is considered, 1. The development of the jaws and teeth. 2. The eruption and irregularities of the temporary and permanent teeth. The remainder of the work is devoted to the diseases of the dental tissues, and gums, and their proper treatment. The first includes caries, exostosis, necrosis, absorption of permanent teeth, disease of the pulp and periosteum, hypertrophy, and necrosis of the alveolar processes; the second embraces acute and chronic inflammation of the gums, tumors, polypi, mechanical injuries of the teeth, tartar, diseases of the antrum, operation of extraction, anæsthesia, &c.

The need of a truly scientific treatise upon the physiology and

pathology of the teeth, has long been felt in this country, especially by practitioners in the rural districts, who have to act the part of dentist as well as physician. The work of Mr. Tomes admirably supplies this want. It is the production of a master mind, after years of patient labor in an ample field for observation and careful investigation.

We therefore earnestly recommend the work of Mr. Tomes to the attention of the general practitioner as well as the professional dentist.

The work of Mr. Taft is especially designed for dentists. It treats of the diseases of the teeth, and of the various operations which fall within the province of the surgeon dentist, with illustrations of the different instruments employed, and methods of operating.

We cannot conclude this notice, without a word of commendation of the typographical execution of these volumes.

A Treatise on Syphilis in New-Born Children and Infants at the Breast. By P. Diday, Surgeon to the Hôpital de l'Antiquaille, Lyons. Translated by G. Whitley, M.D. The New Sydenham Society, London, 1859 ; vol. i., pp. 272.

Gooch on some of the most Important Diseases Peculiar to Women : with other Papers. Prefatory Essay by Robert Ferguson, M.D., Physician Extraordinary to the Queen. The New Sydenham Society. London, 1859, vol. ii., pp. 235.

Memoirs on Diphtheria. From the Writings of Bretonneau, Guersant, Trousseau, Bouchut, Empis, and Daviot. Selected and translated by Robert Hunter Semple, M.D., with a Bibliographical Appendix. By John Chatto, Librarian to the Royal College of Surgeons. The New Sydenham Society, London, 1859, vol. iii., pp. 407.

The three works whose titles are above given, are the first issue of the New Sydenham Society of London. We introduce these publications in this place, not for the purpose of criticism, but to call the attention of our readers again to the object of the society. In the prospectus issued by the council, the objects of the society are thus stated :

1. The translating and editing of valuable foreign works on medical science, as also of important papers which may have recently appeared in foreign journals, transactions of societies, &c. These works, papers, &c., will be translated in full, and brought out as early as possible after their original publication.

2. The re-production of British works, lectures, and papers, which, whilst of great practical value, are out of print, or difficult to obtain, excluding the works of living authors.

3. A year-book of reports in abstract, of the progress of the different branches of medical science, compiled by a committee.

4. Should the funds prove adequate, it is proposed also to prepare volumes of medical bibliography and medical biography.

The subscription will be one guinea annually, payable in advance, equivalent to $5.25.

It will thus be seen that this society proposes to furnish a class of medical publications beyond the reach of the profession at large, and at a very liberal rate; the number of volumes annually to be issued, varying with their size. This year, five volumes are to be published. The three first volumes now distributed, are sufficient guaranty of the class of publications, which this society will furnish to its subscribers. The work of Diday is one of the most important additions yet made to the literature of Syphilis; the reprint of the writings of Gooch, one of the ablest writers on the diseases of women and children, will be welcome to all who are interested in the study of that class of affections; and finally, the collection into one volume, of the best monographs on Diphtheria from the writings of the French, will prove acceptable at this time, when the disease is so generally prevalent.

The volumes are uniformly and neatly bound.

An Introduction to Practical Pharmacy; designed as a Text-Book for the Student, and as a Guide for the Physician and Pharmaceutist; with many Formulas and Prescriptions. By EDWARD PARRISH, Principal of the School of Practical Pharmacy, Philadelphia. Second Edition greatly enlarged and improved, with two hundred and forty-six illustrations. Philadelphia: Blanchard & Lea, 1859, pp. 720.

THE first edition of this work supplied to the profession of pharmacy a much needed hand-book and guide, and was most favorably received. This edition is enlarged by the addition of nearly two hundred pages of new matter and numerous illustrations. As far as our examination extends, it comprehends every branch of pharmacy, with the most minute details, descriptions, and directions for the use of students, physicians, and practical pharmaceutists. No work of the kind, with which we are acquainted, can compare in completeness with that of Mr. Parrish.

Lectures on Surgical Pathology, Delivered at the Royal College of Surgeons of England. By JAMES PAGET, F.R.S. Second American Edition. Philadelphia: Lindsay & Blakiston, 1860, pp. 700.

THERE is no work to which we give a more cordial welcome, than the Lectures of Mr. Paget. They form the very basis of a correct knowledge of surgical diseases, and hence, of correct practice. We are gratified to learn that a second edition of this most excellent work is called for in this country, and trust that it will

find its way to the library of every American practitioner. The present edition appears without additions.

The Use and Abuse of Tobacco. By JOHN LIZARS. Late Professor of Surgery to the Royal College of Surgeons, etc. From the eighth Edinburgh edition. Philadelphia: Lindsay and Blakiston, 1858.

Alcohol—its Place and Power. By JAMES MILLER. Professor of Surgery in the University of Edinburgh, etc. From the nineteenth Glasgow edition. Philadelphia: Lindsay & Blakiston, 1859.

THESE small volumes are designed for general reading, and embrace a popular discussion of subjects to which each refer—by two of the most eminent surgeons of Edinburgh.

In the preface to his brochure, Mr. Lizars states that the habit of smoking is greatly on the increase in Great Britain, the consumption of tobacco being in 1853, 29,737,561 pounds, or more than one pound to every man, woman, and child in the United Kingdom. The author proceeds to consider the subject under the following heads:—

1. The general charcteristics of tobacco. 2. Its use and abuse. 3. Opinions of distinguished persons.

Among the illustrative cases we notice the case of *Angina pectoris, resulting from the use of tobacco*—first published in this journal, by Dr. Corson.

The second work was written at the request of the Scottish Temperance League. Mr Miller makes the following division of his subject:—

1. Alcohol—its place as a poison; a medicine; a luxury. 2. Alcohol—its power as a poison; a medicine; as food; as a condiment; a luxury; a support in labor of the body and mind; and in enduring cold; a means of averting and producing disease; of cherishing age and prolonging life; as affecting the mind; as an instrument of vice and a special opponent to moral reformation; in clinging to its victim.

These volumes, though written for another community of readers, are especially applicable to our own country, where the use of tobacco and alcoholic liquors is rapidly becoming the great social vice.

PART THIRD.

MEDICAL RETROSPECT.

Report on the Progress of Obstetrics and the Diseases of Women; prepared for the New York Journal of Medicine. By E. NOEGGERATH M.D., Physician to the Canal Street (German) Dispensary.

I.—ANATOMY AND PHYSIOLOGY.

1. *Luschka, H., on the Levator Ani of the Female.—Pfeuffer's Ztschr. 3. Reihe V. p.* 113—121.—Dr. Luschka's article contains a minute description of the female levator ani. The origin of this muscle is in both sexes essentially the same. Those bundles which are derived from the os pubis, and which take their course along both sides of the vagina, are in connection with it by a short areolar tissue, but passing by the vagina continue until they reach to the rectum. The lower part of the levator ani is divided in two portions, of which one runs in front of the rectum, while the other portion is attached to its lateral and posterior circumference. This latter, more considerable portion is exactly like that of the male. That portion of the female levator, which is attached to the anterior surface of the rectum, is a flattened, only a few lines broad, arcuated bundle, the lowest point of which is about 1–2 ctmtr. above the orifice of the anus. It is by far less considerable than in the male, and there are no fascicles going from its median connection of both sides to the urethra, as they do in the male.

This wanting portion of the female levator ani is supplied by a muscular stratum, which surrounds the lower portion of the vagina, and being connected with the m. transvers. perin profund., it meets in front the female urethra. It is 4 Mm. broad, and situated as it is, behind the constrictor cunni, it might be properly called constr. cunni profundus.

2. Bernard, *Cl., a New Function of the Placenta,*—Clinique Europ., 3. — Dr. Bernard has previously demonstrated that the liver was a glycogenous organ, that there existed in every organic being an amyloid matter, intended to be transformed in sugar. But at the beginning of fœtal life the liver contains no sugar, and still sugar is found in the tissues and membranes of the fœtus. Therefore the question arises, where is this sugar formed. Directly from the mother it cannot be derived, because the sugar formed in the maternal liver is already decomposed,

before it comes in contact with the circulation of the uterus. The author therefore thought that the placenta was the glycogenic organ. Often repeated examinations of placentas taken from the cow did not yield a proof of this theory, while in the placentas of rabbits and dogs the sought for glycogenic matter was detected; and further researches satisfied Dr. Bernard that the glycogenic organ of cows was to be found in the plaques dispersed in the amnion. This placental liver exists before the formation of the fœtal liver, and the former disappears at the time when the latter begins to develop itself. The placental liver differs from the real placenta by its cellular structure, the latter being only a vascular organ. This organ is a white substance, situated in the placenta of rabbits and dogs, while in ruminants it is located in the amnion. In very young pigs it appears in the form of granulations dispersed over the membranes, which disappear at a later period. Under the microscope these organs appear in the shape of tufts, composed of nuclear cells. Iodine produces a reddish color, very much like the color of the glycogenic matter of the liver. It is therefore a very simple glandular organ. With the beginning activity of the liver the cells of the placental liver disappear, they being transformed into a fatty substance, which contains octædric crystals of oxalate of lime. The glycogenic matter of these plaques is obtained by boiling them with powdered charcoal and by precipitating the filtrated fluid with alcohol. The liquid obtained by boiling, does reduce the copper if diastase be added; and sugar is obtained from it by fermentation.

3. Kussmaul, *on Uterus Unicornis, with and without an Atrophied Accessory Horn.*—Verhandl. der naturh. med. Vereines Zu Heidelberg, V.—Froriep's Notizen, Bd. 1, No. 1.—Monatschrift f. geburtsk, xiv., 1, July.—Dr. Kussmaul, after giving some introductory remarks on the development and malformations of the uterus, proceeds to describe the so-called unicorn uterus. The cases belonging to this class of deformity, which have been published in periodicals or monographs, are the following: 1. By Dionis, Cours d'anatomie de l'homme, p. 309:—Ephemerid. med. phys. German. acad. nat. curios. Decur. II., A, II, p. 477. 2. By Canestrini, Historia de utero duplici, alterutro quarto graviditatis mense rupto in Hungaria anno, 1781, in cadavere ab auctore invento., Augustæ Vindel. 1788. 3. By Fritze, Diss. sistens observ. de conceptione tubaria, etc., Argentorati, 1779. 4. By Güntz, Diss. mang. de conceptione tubaria, duabus observ. Lipsiæ nuper factis illustrata, Lips. 1831. 5. By Dreger, Journ. f. med. org. Chirurg., May, 1834, translat. in E. v. Siebold's Journ. f. Geburtsk. 1835, Bd. xv, p. 142. 6. By Ingleby, Edinb. med. a surg. jour., vol. 42, 1834, p. 350. 7. Rockitansky, Handb. d. pathol. Anatomie, 1842, Bd. III, p. 519. 8. By Tiedemann, Meckel's Archiv, 1819, Bd. v., p. 134. 9. By Scanzoni, Verhandl. d. phys. med. Gesellschaft zu Würzburg, Bd. xiv., 1854. 10. By Behse, Diss. de graviditate in

genere et de grav. estrauter in specie, Dorpat, 1852. 11. By Ramsbotham, Practical Observations on Midwifery, with a selection of cases. Part I. 1832 ; Case 85, p. 407. 12. In Buffalo Med. Jour., September, 1846. 13. By Czihak, Diss. inaug. de graviditate extrauterina, Heidelberg, 1824. 14. By Heyfelder, in Schmidt's Jahrb., 1836, Bd. xi., p. 230. From these cases collected, and some personal inquiries into the subject, the author feels justified in proposing the following theses with regard to the physiological position of uterus unicornis: 1. The menstruation seems to be the same as in the ordinary formation of the womb. 2. Conception is not disturbed. 3. The developed, as well as the atrophied horn, may become pregnant. 4. Conception has been observed in the atrophied horn, in cases where there was no connecting duct with the developed horn, but very likely a channel of this kind existed before conception took place. 5. The sex of the children is not influenced, whether the ovulum comes from the right or the left ovary. 6. Twins have been observed. 7. The unicorn womb may become pregnant repeatedly. 8. The child may become fully developed. 9. The unicorn womb is not more inclined to abortion than that of natural development. 10. In most cases, an internal rupture occurs, when the accessory horn is pregnant. 11. The rupture is seated mostly near the insertion of the tube. 12. In gravidity of the accessory horn, the developed one is always hypertrophied, and endowed with a decidua. 13. The deliveries, after conception of the developed, are as easy as those occurring under ordinary circumstances. 14. The four cases of uterus unicornis, were all observed on the right side. 15. In cases of pregnancy of the accessory horn, it was six times on the left, five times on the right side. 16. Pregnancy of the accessory horn was in almost all cases mistaken for ordinary pregnancy.

4. Lenoir, *Deformities of the Pelvis, by irregular Osseus Vegetations after Fractures, and by Luxations of the Pelvic Bones.*—Archiv. Géner. Jan. et Febr.—Dr. Lenoir divides the pelvic deformities caused by fracture and luxations, into three groups: 1st, those caused by irregular development of the bones after fracture of the pelvic bones ; 2nd, by traumatic, not replaced luxations of the bones in and around the pelvis ; 3rd, by spontaneous luxation of the sacro-vertebral union (Kilian's spontylolysthesis). Of the first class, three observations are recorded, one published by Papavoine, in the Journal de Progrès, t. xii., under the head: case of a fatal delivery, in consequence of fractures and consequent deformity of the pelvis. The patient had received a kick from a horse, and became pregnant after the fractures were healed, the child was delivered with forceps. She died in childbed, and upon a post-mortem examination, a fracture of the right iliac bone, a fracture of the right ramus horizontalis oss. pub., and a fracture of the os ischii, near the tuber, were found ; b, a case published by Rowland Gibson, in

the *Lancet* of 1856, June, page 647. The patient had been run over by a carriage, which injury resulted in an impression of the back bone, and a protrusion of the promontory towards the small pelvis; she was delivered twice by embryotomy; c, a case of David, published in the same journal; the patient fell down stairs, when in the fourth month of pregnancy, and died undelivered at the full term. The sacrum was found split in four portions, two of which, united by a callus, filled the entire space of the vagina.

The second class is represented only by one anatomical preparation, No. 13, of the musée Dupuytren, the history of which, however, is not known. The head of the os femoris, and the acetabula are driven into the pelvic cavity; the latter, and the os ilium being perforated and fractured in several places. Among the third class, the pelves described by Kilian, are mentioned, and another pelvis described by Belloc, in the Bulletin, No. 2, 8e année, 1853, under the head: Vice de conformation, grossesse, operation cæsaréenne, mort et autopsie. This pelvis belonged to a woman forty years old, who had been pregnant eight times; most of her deliveries had been difficult, and terminated with the forceps. Only two children were born alive. After the cæsarean operation, a post-mortem operation was performed, and traces of old caries were found on the three last abdominal, and the first sacral vertebra, in consequence of which the fifth lumbar vetebra had disappeared, while the fourth touched the anterior surface of the first sacral vertebra in a right angle. The vertebral column protruded considerably towards the pelvic cavity, so that the antero-posterior diameter, measured only two and one-fourth inches.

5. Spiegelberg, O. *How is the Weight of the Trunk transmitted to the Os Sacrum.—Monatsschrift f. Geburtsk.* xiv., 1, July.—Dr. Spiegelberg defends his views with regard to the transmission of the weight of the trunk upon the os sacrum, against Dr. Freund's insinuations. The pressure of the trunk, our author remarks, which reposes on the os sacrum must be divided into two portions, one of which works and presses in a vertical line, while the other one works in a direction parallel with the inclined plane of the first sacral vertebra, thus forcing the body to slide downwards. In opposition to this Dr. Freund thinks that the pressure of the body was transmitted to the os sacrum in a backward and downward direction—*i. e.*, vertically upon the inclined surface of the named bone, which latter opinion is certainly not in harmony with mathematical laws.

II.—PREGNANCY AND PARTURITION.

1, Tilanus, C. B.—*Contributions to the Statistics of the Mechanism of Labor.—Archiv. f. d. Holländ. Beitr. I., p.* 144.—*Schmidt's Jahrb.* ciii., 7; July.—The very valuable article of Dr. Tilanus contains an analysis of about 5,000 births from his own observation. Out of

a number of 5,357 children born, there were 5,068 cranial presentations—viz., 3,058 first, 546 second, 1,140 third, and 324 fourth presentations. Of the 1,140 third presentations, 89 remained in this position, while 1,051 were born in second presentations; the fourth presentation remained unchanged in 33 cases, while 291 were changed into first presentations. Mr. Tilanus prefers counting only 2 cranial presentations, as it is done by Smellie, Kilian, Kiwisch, Siebold, and Scanzoni, the first being the left occipito-anterior, the second, the right occipito-anterior presentation. Among these 5,357 births, 20 facial presentations were observed, the chin being directed 12 times towards the right, 8 times towards the left side. Presentations of nates (lower extremities) were observed 248 times, 170 first presentations (left side), and 78 second presentations (right side).

Finally, Dr. Tilanus offers the following table, taken from his personal observations:

Cranial presentations:—	1. occiput to the left	3,382	5,068
	2. " " right	1,686	
Facial presentations:—	1. chin to the right	12	20
	2. " " left	8	
Breech presentations:—	1. left hip in front	170	248
	2. right " "	78	
Cross presentations:—	1. right shoulder or arm in front	14	21
	2. left " " "	7	

2. *Braun, C., on the most Recent Methods of Craniotomy of the Fœtus.—Zeitschr. d. Gesllsch. d. Aezt. Zu Wien, No.* 3.—Dr. Braun's article contains a criticism of the different methods of craniotomy, among which he considers Kiwisch's method (trephining and kephalotripsis,) and that lately advocated by Cohen (perforating kephalotripsis,) as the safest and promptest means to effect delivery. Dr. Cohen's instrument was applied in two cases at the Vienna Lying-in Hospital. The first operation was very successfully performed, while in the second case the instrument proved to be deficient in its action, so that a modification in its construction seemed to be desirable.

3. Hamon, *on the Interruption of Eclampsia by the Accouchement Forcé.—Gaz. des Hôp.* 27.—Dr. Hamon's article advocates artificial delivery in cases of eclampsia appearing during pregnancy. Cases of eclampsia, unconnected with morbus Brightii, are very rarely, if ever observed in deliveries of short duration, while this accident mostly occurs in consequence and during difficult labors. The appearance of eclampsia can be prevented at times during pregnancy by therapheutical agents; if albuminuria, œdema,

headache, disturbances of sight, etc., are present, cathartics and diuretics, afterwards tonic and martial remedies may be successfully applied; if notwithstanding convulsions do appear, it is very rare to see the patient go her full term and the child be born alive. In cases of this kind it is the duty of the physician to save the mother's life by the accouchement forcé, the child being lost as a general rule. The author recollects 18 cases where the mother's life was saved by this proceeding.

The author comes to the conclusion that premature confinement ought to be induced in all these cases of eclampsia where the therapeutical means were insufficient to procure a prompt cessation of the convulsions.

4. Storer, H. R.—*Cases illustrative of Criminal Abortion.—Read before the Boston Society for Medical Observations.—Amer. Jour.*, lxxiv., N. S., April.—Dr. Storer reports the case of a lady, who when five and a half months gone with her first child, suffered from excessive toothache, which had hitherto resisted all attempts of medication, and she therefore intimated the desire to have abortion induced upon herself. The only carious tooth had been already extracted without relief, and after its removal abortion had threatened. She was ordered a fragment of pellistary root, pyrethrum, as a direct gingival stimulant, and on the second day she presented herself cured. In his further remarks, Dr. Storer expresses his strong disapproval of the practice of subjecting patients to the risk of miscarriage by the extraction of teeth during pregnancy.

In the second case reported, Dr. Storer was called to attend a lady for beginning abortion. Upon examination the outline of the os uteri was laterally and symmetrically fissured, so that the cervix presented to the touch an apparently deep and incised transverse wound completely through its substance, with irregular edges and indentations simulating artificial punctures, so that the abortion seemed to be owing to direct instrumental or other violence, which idea however was not verified by the history given by the patient. If, in any case of this kind, death should occur from some cause or other, the result at an inquest would be very dubious, and it is therefore important to remember the occurrence of such a condition of the os, which, produced by lacerations of the cervix from difficult confinements, might be easily mistaken for an artificial wound, performed with the intent to destroy the life of the fœtus.

5. Spöndli *on Multiple Births.—Monatsschrift f. Geburtsk.*, xiii., 6. June.—Dr. Spöndli reports the case of a triple birth, in which all the children presented with the head—all the children presented deformities, consisting in one of hydrocephalus, in the rest of club-feet. All of them died soon after birth. Triple births are of rare occurrence, one of them occurring in 3000 or 9000 cases. In the Vienna Lying-in Hospital 3 triple births were observed among 27000 cases during 6 years. With regard to the presentation of

triplets Naegele found the following dispositions in 14 cases: 6 times the first child presented with the head, the second with the head, the third with the nates; 3 times all the children with the head; twice the first child with the nates, the second with the head, the third with the nates; once the first with the head, the second with nates, the third with head; once the first with head, the second with shoulders, the third with head; once the first with nates, the second with head, the third with head. The article is concluded by the enumeration of several interesting cases of triple birth collected from journals, and a very uninteresting account of several twin-births.

6. Corse, *Intermittent Lochia.* (*Transactions of the College of Physicians of Philadelphia.*)—*Amer. Jr.*, lviii., N. S., April.—Dr. Corse reports the case of Mrs. J——, who on the ninth day after delivery at 9½ o'clock was seized with great pain in the lumbar region, which soon extended down the sacrum to the coccyx, and then a gush of blood took place, which continued to flow as long as the pain lasted, which was nearly an hour; it then ceased with a subsidence of the pain. The next day at the same hour, the same symptoms came on, and ran the same course. This repetition continued for two more days, when quiniæ sulfas was administered, which checked the next paroxysm entirely. Upon inquiry Dr. Corse learned that the patient had been taken with the chills about a year ago during a residence near Salem, New Jersey. She had been quite cured, however, and had not had them since.

7. Deville, *Statistic Researches on the Action of Ergot of Rye during Parturition.—Gaz. Hebd.* vi., 6., Feb. 11.—Dr. Deville read a paper on ergot of rye, before the Paris Academy of Medicine, in which he states his opinion that it was almost always possible to find out the cause of death of the fœtus in utero, and that all those cases, where from asphyxia death had ensued without any appreciable reason, ought to be referred to the administration of ergot. By an analysis of documents collected during the time from 1845 to 1848 in the different arrondissements of Paris, Dr. Deville arrives at the conclusion that of 515 still-born children 72, i. e. a trifling over the seventh portion had come to their death by the use of ergot. (It is very obvious at the very first glance, that this is not the right way to investigate the subject in question, because the returns to city-inspectors are of too little scientific value to serve as a basis for such minute researches as these.—E. N.) He further concludes from the above statistics, that the administration of ergot was always disastrous to fœtal life.

8. *Does the Use of Chloroform during Delivery predispose to Hemorrhages?—Gaz. des Hôp.*, 24.—Dr. Lion Liégard while communicating to the editor of *Gazette des Hôpitaux* two cases of hemorrhages occurring after labors in which chloroform had been administered, and for which no appreciable cause could be found out, he asks information whether he was right to believe that the

inactivity of the womb, preceding and causing these hemorrhages, was due to the influence of the drug. The editor in replying to this request, remarks—and justly so—that chloroform has no influence over the organic muscles, and that therefore chloroform had nothing to do with the hemorrhages mentioned.

III.—DISEASES OF WOMEN.

1. Scanzoni, *a Case of Spontaneous Disjunction of the Right Synchondrosis Sacro-iliaca during Labor.—Allgem. Wien. Zeitg.* No. 8. —Dr. Scanzoni reports an interesting case of disjunction of the synchondrosis sacro-iliaca. The patient, 32 years of age, entered upon her second labor on June 3d, 1858. The child presented in the first cranial position, but advanced very slowly, although the pains were very strong, and caused an almost unbearable pain in the patient's back. Finally the child was delivered; it weighed 8½ pounds, and had an unusually large and hard skull. The woman felt very much exhausted and complained of a violent pain in the neighborhood of the right incisura-iliaca, which extended along the posterior surface of the thigh as far down as to the knee, so that she was unable to change her recumbent position. At first the complaint was taken for ischias, but upon closer examination a disunion of the right ilio-sacral synchondrosis was agreed upon. On every attempt to move, the patient as well as those around her perceived a cracking sound, while an unmistakable crepitation was detected upon vaginal examination. The further development of the disease confirmed this diagnosis; an abscess formed near the right iliac synchondrosis, which was lanced on the 7th of August. A few days after this the edges of the wound closed together, the swelling disappeared, and it was easy to feel the edge of the os ilium, which protruded considerably behind the synchondrosis. The patient lamed when she left the hospital, but was healthy in every other respect.

2. Langenbeck, B., *the Extirpation of Intramural Fibroid Tumors. —Deutsche Klinik* 1.—*Schmidt's Jahrbücher B* 701, *No.* 3. *March.*— The article of Dr. Langenbeck opens with some remarks on the structure and seat of intra-uterine fibroid tumors, and he goes on to say, that all the different remedies recommended for their cure were in most instances of no avail, so that the only reliable way was the surgical operation. This has been performed, as far as our author is informed, 9 times and 3 times by Dr. Langenbeck himself. Seven instances of this number are recorded as cured. The operation is contraindicated in all those cases where the tumor is situated near the peritoneal lining. The first step of the operation is the dilatation of the uterine cavity by sponge-tents. The patient is now placed on her back, with drawn up limbs, the os externum is extended by specula, and that portion of the vaginal and cervical portion which is opposite the tumor, is incised. This being done, the index finger is introduced into the womb high enough to touch the upper border of the tumor. Hereafter the mucous lining,

as far as it covers the tumor, is incised, and removed from the latter by the finger. In some places, where this cannot be effected, a pair of curved scissors must be used. The tumor thus having been freed from its mucous lining, is pulled down by hooks, and severed from the uterine tissue by the aid of the fingers, scissors, or knives. The author reports three cases in which the operation was successfully performed.

3. Trousseau. *Treatment of Uterine Hemorrhage by large Doses of Ergot and Digitalis.—L'Union*, 36.—By numerous experiments with regard to uterine hemorrhages, Dr. Trousseau came to the following results: The ergot of rye is the safest and promptest remedy in post-partum hemorrhages, and in those following after abortion. In hemorrhages at the change of life, it is slow and uncertain in its action, while ratanhia and sulphuric acid are more reliable. In bleedings from carcinoma its effect is remarkably prompt. Dr. Trousseau does not believe in its specific styptic effects, but is inclined to attribute its anti-hemorrhagic qualities only to its action upon the muscles of the uterus. The digitalis was applied by Trousseau in doses of from 0.50 to 1 grmm. pro die in one case only, which left the question about its efficiency undecided. The remedy is principally advocated by Mr. Howship Dickinson.

4. Decaisne. *Hemorrhage during Menstruation, owing to Granulations of the mucous Membrane of the Uterus. Cure by Digitaline after Unsuccessful Abrasion and Cauterization of the Granulations.—Gaz. des Hôp.* 14.—Dr. Decaisne reports a case of successful application of digitaline in uterine hemorrhages. A hitherto healthy woman was taken with considerable flooding during every menstrual period ever since her third confinement. Among a host of remedies, sea-bathing was ordered, but all to no avail. Upon closer examination, a great quantity of fungous granulations were found upon the mucous membrane. They were duly removed and cauterized, still no impression was made upon the hemorrhage. Eight months after this treatment had been applied, Dr. Decaisne took charge of the patient, and ordered her to take pills containing each 4 mgrmm. of digitaline for eight days, at the time of menstruation, beginning with two pills, the dose to be increased to six. In a very short time the pulse came down from 90 to 80 strokes, on the second day uterine contractions were observed, which lasting up to the eighth day, lessened the hemmorhage considerably. This remedy was repeated several times, and a perfect cure effected.

5. Godefroy, *on a New Method of Replacing a Retroversio Uteri.—Gaz. des Hôp.* 54.—Dr. Godefroy has successfully applied the following proceeding in five cases of retroversio uteri occurring during the first half of pregnancy. The patient, supported by assistants, is placed above the upper edge of the bed in such a manner that the head and arms come in contact with the floor, while the anterior surface of the thighs and the legs remain on the bed. By this position, the pressure of the intestines upon the uterus is avoided, and the patient is at once prevented from coun

teracting the manipulations of the physician by muscular exertions. The redressment is effected by the pressure of 3 or 4 fingers introduced into the rectum.

6. Buhl. *The Pathological Anatomy of Puerperal Fever.—Ærztl. Intelligzbl. Bayern's. No.* 14. *Monatshrift für Gebürtsk, XIV, July.*—From an analysis of fifty post-mortem examinations, Dr. Buhl comes to the conclusion, that there is to be found a constant and characteristic sign in every case of puerperal fever, viz., a decayed, soft, dark-brown, or greyish-black offensive matter deposited on the inner surface of the womb. From an anatomical as well as a clinical view, two principal forms of the fever must be recognized: 1st, the puerperal pyæmia, 2nd, the puerperal peritonitis. In the cases observed, the puerperal pyæmia did not prove fatal before the 9th day, and very often only after three weeks. It was observed 18 times. The channel of infection are the veins. The pyæmic form is characterized by thrombi containing pus, deposited in the veins near the placental insertion, in those of the uterine walls, in those belonging to the plexus pampiniformis, or in one of the venæ spermaticæ. The so-called metastatic deposits are not needed to prove a case of pyæmia. They are comparatively rare in puerperal pyæmia. Among the 18 cases, only 1 fresh deposit was found in the lungs, and 1 in the form of a hard, caseous substance. The pleuræ exhibited frequently ecchymoses. Three times a purulent exudation was discovered in the chest, without a pyæmic infarctus of the lungs. The kidneys exhibited once pyæmic deposits, and twice very small extravasations of blood. Twice was found hypopyon, three times pus in or around the joints, once erysipelas of the nose, and twice phlegmasia alba. The spleen was of normal size (at least in the first three weeks of the disease) and contained three times yellow deposits, in one instance a deposit which was already of the caseous transformation.

The puerperal metritis was more frequent, and ended sooner fatal, than pyæmia. Three times oftener in the first than in the second week. Only two out of thirty-two cases died after 6 and 8 weeks. There was always a purulent exudation present; 18 times pus was found in the fallopian tubes, 14 times under the serous lining of the womb, especially in the neighborhood of the neck, but equally in the lumbar glands and in the sub-serous cellular tissue. The peritonitis may be divided ætiologically and anatomically into two forms: 1st, cases of peritonitis, by transmission of the virus through the tubes; 2d, cases where the infecting matter from the inside of the womb was taken up by the lymphatics (formation of purulent thrombi in these vessels), which transmitted to the serous lining of the abdomen, produces peritonitis. This latter form is the most violent and disastrous of the two, and is generally observed during epidemics. In pyæmia and peritonitis, the following was found: 1st, an almost constant swelling and œdematous condition of the retroperitoneal, inguinal and often of

the mesenterial glands. 2d, osteophytic growths on the inner surface of the skull. 3d, in several cases a swelling of the cortical portion of the kidneys, and microscopical signs of acute Bright's disease. Cases without anatomical alterations were not observed, while in some they were very little intense.

Report on the Progress of Infantile Pathology and Therapeutics. Prepared for the New York Journal of Medicine, by A. Jacobi, M.D., Physician to the Children's Department of the German Dispensary.

I.—GENERAL PATHOLOGY.

Robert Küttner, M.D., *On the Influence of Sex in Diseases of Children.* Journal für Kinderkrankheiten, 1859, 1, 2.

Dr. Robert Küttner, of Dresden, proves by accurate statistical reports, that long before the complete development of the sexual organs, even in the earliest infancy, diseases depend much on sexual difference. The results of his comparative examinations of ten thousand cases of infantile diseases, are the following: 1. Boys, particularly in the first year, suffer more from inappropriate food and diseases of the digestive organs than girls of the same age, and a greater number of boys will perish in consequence of such diseases; the relative mortality being about the same in either sex. 2. Diseases of the brain and the nervous system in general, are twice as frequent in males as in females, particularly in and after the fifth year of life. 3. Umbilical and inguinal herniæ are more frequent in males than in females. 4. Diseases of the respiratory organs are more frequent in females after the third, and even more so after the fifth year. A larger number of such diseases prove fatal in females. 5. The same observation is made in organic diseases of the heart. 6. Acute diseases of the blood exhibit no perceptible difference as to sex, but chronic anæmia and scurvy-like decomposition of the blood is more frequent in females than in males, especially after the eighth year. At this age the proportion of thus diseased females to males, is 10 to 1. Scrofula and tubercles show no particular difference in the first years, but after the fifth year of life tubercles in the lungs are found more frequently in females. The number of cases of rhachitis is pretty equal in the two sexes, but it is often developed at a later period, and is apt to last longer in females than in males. 7. Chronic diseases of the skin, particularly eruptions of the scalp, are more frequent in females than in males after the ninth year. 8. The same is found to be the case in tumors of the thymus gland.

II.—TOXÆMIC DISEASES.

1. D. Wooster, M.D., *An Essay on Diphtheria, with cases.* San Francisco, 1859; pp. 27.

2. Edward Copeman, M.D. *An Essay on the History, Pathology, and Treatment of Diphtheria.* Norwich, 1859 ; pp. 47.

3. Ernest Hart, *On Diphtheria: Its History, Progress, Symptoms Treatment and Prevention* (Reprinted from the *Lancet*). London, 1859 ; pp. 36.

4. Scoutetten, M.D., *On the Prevention of Accidents consequent on Measles and Scarlatina.* Gaz. Hebdomadaire, 1859 ; No. 13.

5. B. Arnold, M.D., *On Renal Affections accompanying Scarlatina.* Memorabilien aus der Praxis, 1859 ; iv. 3.

5. Anizon, M.D., *On the effect of Sulphate of Quinine in Albuminuria following Scarlatina.* Gaz. Hebd., 1859 ; No. 7.

I.—Dr. D. Wooster of San Francisco, has published a very elaborate essay on Diphtheria, containing almost everything note-worthy that has appeared since Bretonneau, in French, English, and American literature on this subject. The work is for the most part not original, being a digest of what has been written before, but will prove highly instructive from the variety and accurate selection of its contents. The main results the author arrives at, from both his literary studies and the cases observed and described by himself, are the following :

1. Diphtheria is a specific disease.

2. It is distinguished from scarlatina by the absence of eruption ; from grangrenous sore throat, by the absence of ulceration and sloughing ; from croup, by the aplastic nature of the exudation.

3. Diphtheria may properly be divided into two varieties, the mild and the severe.

4. The mild is seldom fatal ; slight or no difficulty of deglutition, little fever, no engorgement of cervical glands, neither coryza, nor lachrymation, but presenting the positive diagnostic sign of aplastic exudation on the tonsil, palate or pharynx.

5. The severe is recognized by the diagnostic aplastic false membrane, high fever at first, coryza, lachrymation, engorged glands about the jaw, difficult deglutition, difficult utterance, or complete aphonia, great diminution of animal power, cyanosis, vomiting towards the close of the affection, and intense gangrenous fœtor from the decomposition of the exudation.

6. Diphtheria is contagious.

7. The simple form is easily controlled by treatment which is the same as for the severe form, modified according to the comparative urgency of the case.

8. The severe form is with difficulty controlled, and the prognosis is always extremely unfavorable, even at the beginning.

In regard to treatment, we do not fully agree with the author, nor are we inclined to submit to every one of the above aphorisms, as for instance, No. 2. The local treatment has certainly to consist of such applications as will destroy the false membranes, as

hydrochloric acid, nitrate of silver, alkalies, and we add, more than any other alkalies, chlorate of potassa and soda. Our own experiments instituted according to Barthez and some other French writers, prove that no alkali is more powerful in dissolving false membranes than the chlorate of soda, and next to it, chlorate of potassa. The internal treatment of the author consists in administering an emetic in the beginning, and quinine as a tonic afterwards. He insists upon ablation of the tonsils, considers tracheotomy advisable when other means fail to relieve the cyanosis, and believes chlorate of potassa harmless, but of unproved efficiency in diphtheria. Emetics may sometimes be indicated by the state of the stomach, and then, but only then its administration may be permitted, for it must not be forgotten, that the beginning of diphtheria will not once in a thousand cases exhibit a mass of false membranes that require an emetic for their removal. And it is equally true, that the majority of fatal cases perish from decomposition of the blood, and not from suffocation. Therefore the main indication during the course of the disease is to prevent the decomposition of the blood and the accompanying fever; and the main remedies will be quinine in antifebrile large doses, acids (dil. mur. ac.), and chlorate of potassa, which we, after a very extensive experience, consider equally important in both its internal and external use. That the ablation of the tonsils is of no use in cases which exhibit no symptoms of suffocation, we need not say, but certainly this operation must be considered as worse than superfluous, inasmuch as it is well known that the sore surface will at once be covered by a new formed diphtheric membrane. Tracheotomy will seldom be thought of, as death from diphtheric croup, following the pharyngeal diphtheria, is less frequent than from dissolution of the blood. We must add, that we have seen temporary relief following tracheotomy in very severe cases of diphtheria proceeding downwards into the respiratory organs, but we have never been so fortunate as to see a single case that finally recovered after the thorough decomposition of the blood pervades the whole system. Finally, we add that we attribute a great number of recoveries to the constant use of the tincture of muriate of iron, to which our author slightly alludes; we administer it in every severe case, to remove the consecutive anæmia, and to secure a final and entire recovery.

II.—Dr. Copeman's essay is, in a great part, a recapitulation of Bretonneau's, and Rilliet's and Barthez's general principles, the author frankly stating that most of what he had stated "is based upon the authority of other writers; and that it would be premature to speak very much or strongly upon personal experience of the treatment of an affection which has not yet been amongst us a sufficient length of time to make the practice of individuals of much general or decided value." The author, however, is a thinking physician; he distinguishes well between the sporadic and epidemic character of the disease, takes in regard as well the locality

as the form of diphtheria, and the character of the fever. But his weak point is undoubtedly therapeutics and its indications. We are decidedly of opinion that even mild forms of diphtheria go hand-in-hand with (slight though it be) decomposition of the blood; and therefore we positively protest against both bleeding and calomel so frequently administered by the author. Generally the author seems to have seen more cases of the pseudomembranes progressing downwards into the larynx and trachea, than such as result in a speedy death without almost any remarkable symptoms. Thus only can we explain the fact that local affections are always more regarded than general symptoms, which, combined with the adynamic fever, will be prominent in the majority of severe cases.

III.—The opinion of Dr. Hart, whose careful and able report was first published in the London *Lancet*, will be learned best from the following concluding propositions as given by himself:

1. Diphtheria is a specific disease. This is seen in its origin, march, and mode of extension; in the character of its exudation; in its local manifestations; in its seats of predilection; in its toxic influence; in its prodromata, its manner of termination, and its sequences.

2. It is often confounded with scarlatinal angina, and with gangrenous cynanche.

3. It is propagated by infection and by contagion. It is both epidemic and sporadic in its manner of invasion, and is remarkable for the severity with which it is developed in limited centres of population.

4. Diphtheric angina presents three varieties, which may be designated—*First*, simple diphtheric angina. *Second*, croupal diphtheric angina. *Third*, malignant diphtheric angina. The prognosis of the first is favorable, of the second unfavorable, and of the third most unfavorable.

5. The treatment should include the local application of a solution of nitrate of silver, Beaufoy's concentrated solution of chloride of sodium, or hydrochloric acid, according to the circumstances. The internal remedies most useful are, emetics in the early stage of croupal diphtheria, and the tincture of sesquichloride of iron, with chlorate of potash.

6. Tracheotomy should be resorted to in the second or third stage of croupal diphtheria; leeching, blistering, and bleeding should always be avoided.

7. The means of prevention, besides careful hygienic measures, as ventilation, etc., must always include the daily examination of the throat where the epidemic type presides, and the isolation of the patients.

IV.—Dr. Scoutetten repeats his views on the prevention of the dangers consequent on measles and scarlatina, published as early as 1838. In the commencement of desquamation he applies oil to the whole surface of the body, keeps the patient in bed, and orders a bath the next day, to be followed by another embroca-

tion. The number of embrocations depends on the severity of the disease ; the author, however, seldom found more than four embrocations and two baths necessary. Thus Dr. S. is the first to introduce into French literature oily embrocations in cases of acute exanthems, without, however, knowing that a good while before his days, C. Fr. Dähne (1812) and Schneemann (1848) have strongly recommended oil or lard to be applied externally in such cases, especially in scarlet fever.

V.—Dr. B. Arnold examined the urine of seventeen patients suffering from scarlatina, which was not followed by any dropsical symptoms, in the stages of eruption and desquamation. He found albumen (more or less) and epithelia in thirteen ; albumen, fibrinous casts, and blood corpuscles in one ; no albumen, no fibrinous casts, and no blood in three. Of seven cases where the urine was examined during the consecutive dropsy, albumen and epithelia were found in two ; albumen, fibrinous casts, and blood corpuscles in five. From these facts Dr. A. arrives at the conclusions, that different forms of renal troubles are met with in scarlatina, and that even in the early stage of eruption the kidneys may be found diseased. The renal affection in this early stage will sometimes show itself as a mere hyperæmia, as a catarrh of the canaliculi uriniferi (Johnston's and Todd's "nephritis desquamativa") and even disappear by itself, but it may progress to such an extent as to form the croupal and parenchymatous inflammation of the kidneys.

VI.—Dr. Anizon urges the fact, that not the blood, but the tubuli uriniferi are the seat of disease in albuminuria consequent upon scarlatina. The therapeutic indication, if any, is therefore to modify the inner surface of the tubuli, and the remedies must be looked for amongst those agents that will be eliminated by the urine. The sulphate of quinine being one of them, the author thinks it most apt to prevent the expulsion of the epithelia and the transudation of albumen from the blood. He succeeded in curing albuminuria in three cases, by administering from 5 to 10 grains of sulph. chin. daily for a number of days.

III.—RESPIRATORY ORGANS.

1. E. Schottin, M.D., *On Asthma Thymicum.*—Archiv für Physiologische Heilkunde 1859. III. p. 205.
2. Clar, M.D., Prof., *Observations on Anomalies of the Thymus.*—Jahrbuch für Kinderheilkunde und physische Erziehung, 1859. II. 3.
3. Reymann, M.D., *Pemphigus connatus, with a Lung Test.*—Preussische Vereins-Zeitung, 1859. II. 13.

I.—Dr. Ed. Schottin arrived at the conclusion, from three cases accurately described, that the thymus gland *may* produce a spasmodic affection of the glottis, whenever the head and isthmus of

the gland reach as far down as into the incisura semilunaris manubrii. All the three children suffering from laryngismus were large, well developed and fat, without apparent hypertrophy of the thymus. The paroxysms did not appear before the sixth month, were not strong in the beginning, and were observed during the sleep of the patients only. Gradually the attacks increased in force to such an extent as to be produced by swallowing. Supination readily brought them on, and the veins of the neck appeared always to be swelled. The attacks became rarer and less dangerous by scarce diet and the internal use of iodide of potassium. The common results of all the post-mortem examinations were the following: The thymus was hypertrophied in all its parts; the structure of the inferior lobes normal. In the head and part of the isthmus situated in the aditus juguli the tissue in regressive metamorphosis, and firmer, paler, and capable of exercising a pressure on the bloodvessels. The larger veins of the neck were dilated, and the cellular tissue in the neurilema of the vagus nerve was of unequal thickness and density. As the thymus gland was not large enough to be rightly called hypertrophied, and as there is a number of cases, in which the gland has been found to extend far below the manubrium sterni without producing spasmodic affections, the author is not of the opinion that the position of the head and isthmus in the aditus juguli alone must necessarily bring on reflex paroxysms by pressure on the vagus nerve or on bloodvessels. But he considers the cause of such a pressure, with its consequences, to be found in the occasional thickening of the head and isthmus of the thymus gland. After all, Dr. Sch. acknowledges the thymic asthma to have a real existence and to be produced by the thymus thickened and perhaps altered in its structure; thereby exercising a pressure on the vagus nerve either directly or by the consecutive dilatation and swelling of the veins of the neck.

II.—From a series of eight cases Prof. Clar draws the following conclusions:

1. There is a dyspnœa referable to congenital hypertrophy of the thymus. This dyspnœa may degenerate into real suffocatory spasms, whenever the hypertrophied thymus is either occasionally swelled or complicated with pulmonary catarrh.

2. Therapeutical indications are given for the use of emetics, antispasmodics, cold lotions, derivating and antispasmodic injections, iodide of potassium externally and internally.

3. Hypertrophy of the thymus is a very dangerous complication in croup, because of the double danger from cerebral and pulmonary œdema; tracheotomy performed in such a case would prove unsuccessful.

4. In some sudden cases of death, swelling or hypertrophy of the thymus, combined with pulmonary œdema, are the only traceable causes of death.

5. Hypertrophy of the thymus may just as well give rise to

hyperæmia, as to œdema of the brain and lungs. Both of these anomalies may produce a sudden death.

6. The prognosis of pulmonary and bronchial catarrh becomes most unfavorable by the complication with a hypertrophied state of the thymus gland.

7. Congenital diseases of the heart and hypertrophy of the thymus gland are no less a very dangerous complication, particularly so on their combination with catarrh of the respiratory organs.

8. Heteroplastic deposits into the thymus glands are probably not found unless similar deposits are, at the same time, observed in other organs.

III.—Dr. Reymann reports the case of a woman who was delivered, in the eighth month of her pregnancy, of a child apparently living, breathing though incompletely, moving its limbs but not crying. Thus it remained half an hour. The whole surface of the body was covered with vesicles half an inch in diameter, the epidermis of which was easily lifted and removed. The lungs were of a pale red color, filled the whole thoracic cavity and covered the pericardium; when taken out and placed in water together with the heart and the thymus gland, they sank. In the same manner the lungs separated from the heart and thymus, even single parts of the lungs, did not swim, nor did gas escape. The pulmonary substance was compact, as it were hepatized. Certainly the symptoms of life observed in this case were so slight, and the respiratory action so little, as not to fill the lungs sufficiently with air. The general assumption, that actual life is to be excluded whenever the lungs will sink in water as in their fœtal state, will hardly be shaken by a case like this.

IV.—ORGANS OF DIGESTION.

1. Robert Wertheimber, M.D., *On Angina Pharyngea Œdematosa in the Infantile Age.—Journal für Kinderkrankheiten*, 1859. 1 & 2.
2. Hermann Schwartze, M.D., *Pathologico-Anatomical Description of Cholera Infantum.*—Ibid., 5 & 6.

I.—Dr. R. Wertheimber publishes, under the name of angina pharyngea œdematosa, four cases of serous infiltration of the submucous tissue of the pharynx, produced by an inflammatory process. The cases were observed in either spring or fall, during cold, foggy weather, in children with pale skin, flaccid muscles, and with anomalies in the development of the osseous system. Difficult breathing, want of appetite, and constant rhonchi in the throat were the first symptoms. A large quantity of colorless and slightly consistent mucus was found to adhere to the mucous membrane, and even to fill the isthmus faucium. Velum pala-

tinum and uvula were, after the mucus was removed, found to be considerably swelled; the uvula particularly appeared thickened, soft and much elongated; the tonsils, too, appeared large in their circumference and loose in their structure. The mucous membrane of all these parts was pale, but partially injected with blood in the capillaries, and felt soft, moist, and viscid to the touch. The temperature of mouth and pharyngeal cavity proved normal. The difficulty of respiration was proved to exist by the acceleration of breathing, by the sympathetic movement of the nostrils during inspiration, and by the anxious expression of the face and restlessness. Respiration was noisy, with loud expiratory snoring, the voice "veiled," but neither hoarse nor suffocated. The voice became clearer, and respiration less difficult after the mucus was removed. Both swallowing and sucking were difficult. The disease was sometimes acute, sometimes chronic; prognosis is generally favorable, as some cases will recover without any therapeutical means. Emetics once or repeatedly administered, and slight diaphoretics have a favorable effect, and local derivants, as sinapisms applied to the neck, will prove useful. Whenever a case shows a tendency to become chronic, the parts ought to be sponged with a solution of nitrate of silver in water (gr. x. to f. ʒi.). One single case recovered after the internal use of small doses of iodide of potassium.

II.—Dr. Schwartze publishes the following results of forty post-mortem examinations made on children who perished from intense gastro-intestinal catarrh, and consecutive cerebral symptoms, a disease generally called cholera infantum. All these children died in the first four months of their life. The emaciation of the body was considerable, fat and muscles were greatly diminished in volume, skin pale, face and extremities cyanotic. The cerebral meninges were always hyperæmic; in some cases there were extravasations, the choroid plexus hyperæmic, sometimes dark red, and all its veins greatly dilated and blocked up with cruor; the sinus duræ matris stuffed with blood, sometimes liquid, but usually coagulated, cruor and fibrinous lumps being mixed. Thromboses were mostly found in the sinus transversus, and in sin. long. inf., sometimes the coagulation was as large as to extend from the confluens sinuum to the jugular foramen; in one single case, the obliteration was found in all the veins of the brain. The arachnoid membrane and pia mater, were seldom infiltrated with serum; yellowish purulent infiltration was found in a single instance. Below the membranes, between the gyri, a slight serous exudation was generally found. Venous hyperæmia was no less visible in the medullar substance of the brain, rarely in the cortical substance. This latter is usually anæmic, of a yellowish color, while the former is pink, with clearly perceptible bloodvessels, from whose openings dark bloodpoints are seen arising. The consistency of the cerebral substance is but little, it is soft and pulpous. The ventricles are void; in two cases the ependyma was

thickened. Extravasations were sometimes found extensive; encephalo-hemorrhagia, once, and real softening of a part of the medullar substance of the large hemispheres, once. The jugular veins are usually full of blood, sometimes not equally so on either side. In twelve cases out of forty, muguet was met with, and similar deposits in trachea and larynx also. The mucous membrane of the bronchia, was always injected with blood, sometimes more, sometimes less. In the lungs, some particles were atelectatic, beside lobular pneumonic infiltrations and indurations, and local hemorrhages; the posterior part of the inferior lobes mostly hypostatic, the superior lobes frequently œdematous or emphysematous. Pulmonary hemorrhages are explained by the diminution of the energy of the heart, and the retention of the blood in the pulmonary tissue; many pneumonic indurations may originate from emboli introduced by cerebral thromboses. The left ventricle was contracted, usually void; in the right ventricle there was a little blood, usually very liquid, very seldom coagulated cruor, and but exceptionally fibrinous coagulations; in some cases terminating very rapidly, there were some solid coagulations in the left ventricle also. At the margins of the mitral and tricuspidal valves gelatinous thickening was found, with small extravasations. The liver was found in almost every condition as to the amount of blood contained therein; its consistency was sometimes firm and solid, sometimes there was fatty degeneration; in one case it was icteric and very hyperæmic. The amount of blood in the spleen was equally variable; it was generally hard and fragile. The kidneys were mostly anæmic; in four cases only where thrombosis of the renal vein was found, it was hyperæmic. Infarcts of uric acid were observed thirteen times; they are the more frequent the smaller the amount of water is in the blood. The mucous membrane of the stomach is injected with blood, its membranes sometimes softened; its contents are usually acid. The intestinal canal shows not always the same seat, nor the same form of disease; swelling of the solitary follicles and the mesenteric glands, is most constant. The catarrh is most prominent sometimes in the colon, sometimes in the jejunum and ileum, sometimes in all of them alike. Sometimes hyperæmia and anæmia are alternating. Sometimes ecchymosis and extravasated blood is met with; sometimes, though rarely, a greyish discoloration of the mucous membrane. The follicles appear considerably swelled and reddened, and will sometimes burst. The mesenteric glands, which are usually increased in size, are in their interior either white and solid, or greyish and infiltrated with serum, or hyperæmic, particularly in their cortical part. Much gas is contained in the intestines, besides there are copious serous or mucous fæces, of an intensely sour smell. After all the main characteristic of the disease is found in the rapid diminution of serum in the blood, whereof troubles of the circulation of the blood, particularly in the brain and lungs, are the necessary con-

sequences. Thus the rapid deaths of the little patients are easily explained, the more so in such cases where thromboses are brought on by the interruption of the circulation in the veins.

V.—NERVOUS SYSTEM.

1. H. Kœhler, M.D., *Cases of Opisthotonus depending on Spinal Disease in Children Suffering from Hydrocephalus.*—Journal für Kinderkrankheiten, 1859, 5 & 6.

Dr. H. Kœhler asserts to have often found in cases of hydrocephalus, the oblongated spine and its meninges, even the cervical and dorsal portion of the spine in a diseased condition. The alterations met with in the brain could many times be shown to exist contemporaneously in the spine, and congestions to the membranes of the medulla oblongata were present in almost every case. From this he concludes that it is wrong to attribute the convulsions and spasms observed in hydrocephalic children to cerebral irritation only, but that they may just as well be considered as symptoms of the coincident spinal affection.

PRACTICAL MEDICINE.

Chorea treated by Sulphate of Zinc.—Mr. W. H. Stone, of St. Thomas' Hospital, gives the following statistics of cases of Chorea :—Of 16 cases treated with sulphate of zinc, 13 went out cured, 3 relieved ; but 2 of the latter were in a fair way of recovery, and may probably be set to the credit of the medicament. On the other hand, three of those ultimately cured, owed their improvement, partly to ferruginous preparations ; and in one case the zinc had no effect whatever. It may, then, be stated generally, that advantage was derived from the zinc in 14 out of 16 cases. The longest stay in the Hospital among these cases was 123 days ; the shortest 14 ; the average stay, 44.6 days.

Fourteen cases were treated during the same period with preparations of iron ; all were cured. The longest stay in Hospital was 161 days ; the shortest 6 days ; average stay, 44.2 days.

Twenty cases were treated with liq. potassæ arsenitis :—18 cured ; 1 relieved ; 1 died. The longest stay in Hospital was 55 days ; the shortest 6 ; average stay, 26.3 days. Average stay in Hospital of the 50 cases submitted to the three principal remedies, 37.2 days ; average stay of all the 54 cases, 35.4 days.

The results of this analysis are somewhat remarkable, as failing to confirm the usual estimate of the value of sulphate of zinc in this disorder. The iron seems to act more certainly, and the arsenic both more certainly and more rapidly than the zinc. The average duration of treatment both with iron and zinc, 44.2 days and 44.6 days respectively is very similar, and both are above the general average of the whole number of cases, namely, 35.4 days; whereas the average stay of the arsenic cases falls as low as 26.3 days. This difference is the more remarkable, as the character of

the cases submitted to the arsenical treatment rather exceeded in severity that of the others; and, indeed, the only death recorded belonged to this division.

On the Effect of long-continued Doses of Iodine. By M. Rilliet.—M. Rilliet, of Geneva, relates some cases to the Paris *Académie* in proof that iodine, although administered in small doses, if continued for too long a period, may gradually induce very serious symptoms, the origin of which may not always be obvious. He concludes:—1. The prolonged absorption of an iodized salt, whether contained in water, the air, or in food, is not always without danger. 2. The inhabitants of some localities are more exposed to this influence than others; and such susceptibility may be due to the minute quantity of iodine contained in the air, water, or food, employed in such localities. 3. This iodic intoxication is perhaps more to be feared when the medicine is given in small than in large quantities, as a preventative rather than as a curative agent in a localized and confirmed diathesis. 4. It is a very exceptional occurrence in childhood, rare in adult age, and more to be feared as the subjects advance in life. Therefore the administration of iodine to persons older than 40, must be especially watched, and it must be suspended on the appearance of the first symptoms of saturation, as bulimia, emaciation, palpitation of the heart, or nervous susceptibility. 5. The best remedies in this kind of slow poisoning are milk, restoratives, change of air, and iron.—*Bulletin de l'Académie,* and *Med. Times and Gaz.*

SURGERY.

Thirty-five cases of amputation of penis for Epithelial Cancer. Med. Times and Gaz.—Amputation of the penis is not, under ordinary circumstances, an operation attended by any material risk to life. Of the thirty-five cases given above, all, excepting two, resulted in recovery, and in one of the latter the fatal event was in no way connected with the operation, and did not occur until three months after it. In the only one in which death *bona fide* resulted from the operation, it was caused by a low form of pneumonia which supervened in the fourth week. The patient had previously been a healthy man. Such results will, of course, occasionally follow all operations, even the most trivial, especially when performed in the wards of Hospitals where erysipelas, pyæmia, etc. are often rife. The risk attending amputations of the penis is probably increased slightly in proportion as the advanced stage of the disease requires that it be performed low down. When, as we have seen in one or two instances, it is required to dissect away the crura of the organ from their attachment to the bone, the danger attending it may even become considerable. In none of the cases in our present series, however, was so extensive a dissection required, and a majority of them were amputations not much below the glans.

Age most liable to Cancer of the Penis.—The age of the patient is

stated in only 23 out of our cases. The oldest in the series was 77, the youngest 27. To classify them according to age,—we find one under 30, four between 30 and 40, eight between 40 and 50, four between 50 and 60, five between 60 and 70, and one between 70 and 80. Thus it would appear that middle age is the period of life most liable to this form of cancer, a circumstance to which probably several influences contribute.

Exciting Causes of Cancer of the Penis.—It has long been a matter of observation among Surgeons that congenital phymosis often acts as a localizing or exciting cause of cancer of the glans. The disease is exceedingly rare in Jews. In only four of the cases in our series do the notes state that this condition of the prepuce had existed ; but it must be borne in mind that no special attention was given to the reporting of the previous history of the case by those who have supplied to us the data we have used. The object alone in view was the result of the operation: Thus it is highly probable that a far larger proportion were really the subjects of phymosis. In one case it is stated that a long-standing venereal sore had preceded the malignant one, and in another, the cancerous ulceration attacked a cicatrix left by a wound in infancy.

Forms of Cancer to which the Testis is liable—Of the above thirty-six cases it would appear that in almost the whole the form of cancer was the soft form of medullary. In several the structure of the diseased mass was firmer than that of a typical medullary growth, but in none did it approach that of true scirrhus. Modern histological investigations have indeed tended to show that true scirrhus, such as that so commonly seen in the mammary gland, for instance, is never met with in the testis. The supposed instances of it described by Sir Astley Cooper, and other writers, have proved on microscopic examination to be not cancer but cartilage. It is quite possible also that examples of syphilitic sarocele, with an unusual degree of induration, may occasionally have been regarded as scirrhus.

Age most liable to Malignant Disease of the Testis.—It would appear that all periods of life, excepting the senile, and including even those of infancy, are liable to the occurrence of malignant disease of the testicle. In the youngest patient in our list it began at the age of one year and eight months, whilst the oldest was 59. Taking the decennial periods, we have three instances of the disease occurring between the first and tenth years, one between 10 and 20, eight between 20 and 30, thirteen between 30 and 40, six between 40 and 50, and five between 50 and 60. The age stated in each case is that at which the patient came under Surgical treatment for his disease, and the age at which the latter had first commenced was most probably about a year younger. Bearing this fact in mind, we can have no hesitation in accepting the conclusion, that the first half of adult life (from 20 to 40) is

the period in which the testis is most liable to be attacked by medullary cancer.

Usual rate of progress of Cancer of the Testis.—Malignant disease of the testicle has often been taken, and very properly so, as a typical example of cancer. It is acute in its onset, and very rapid in all its stages of progress. The facts recorded in the above series fully bear out these statements, and the inference is of great importance in its practical aspects.

CORRESPONDENCE.

On the Effect of Pressure upon Ulcerated Vertebræ, and in Morbus Coxarius, and the Relief afforded by Mechanical Remedies, with Cases. By H. G. DAVIS, M.D.—In giving a history of cases, with the design of illustrating the efficiency of any specific mode of treatment, it is due the profession that at least a portion of them should embrace the more difficult forms of the disease, in order that a correct judgment may be formed as to the power or applicability of the remedial agent. Medicines that would control a disease, when present in a mild form, might be totally inadequate to meet the urgency of a more malignant type. What is true of articles of the Materia Medica, is equally so of mechanical contrivances when used as remedial agents. A given principle, or an apparatus constructed upon it, may be applicable to Potts' disease, when located in a particular portion of the spinal column, yet worthless, or positively injurious, when applied for disease in some other part. Apparatus that might be quite successful if the lumbar or lower dorsal vertebræ were the seat of the difficulty, where the tendency to deformity is comparatively slight, might fail entirely, were the disease located in the upper dorsal or cervical, where the tendency to deformity is very great. In fact, most of the apparatus in use for the treatment of Potts' disease has no application when the disease occurs above the middle of the dorsal vertebræ. Most of them indeed cannot rightly be termed apparatus for treating Potts' disease—as they are applicable only to a limited number of cases—and it is not unreasonable to infer, that even in these they cannot be as efficacious as an apparatus, the principle of which is so broad and universal as to be equally as well suited to the worst forms and the most difficult situations, as to the milder forms and more favorable localities. The adaptation of one is partial, while that of the other is universal. An apparatus that can remove the deformity in a patient, arising from lateral curvature that had existed for some years, and then followed by Potts' disease in the middle dorsal vertebræ, the former producing the ordinary lateral deformity resembling the letter S, while the latter gives rise to the angular or humpback of Potts' disease, must be much more efficient in all cases, than one that is only applicable to one of these distortions; yet an apparatus might be somewhat efficient in such a case, and not be in any way applicable to Potts' disease, or lateral

curvature affecting the cervical region. In Potts' disease, that apparatus which most effectually enables the patient to rest upon the lateral processes of the vertebræ the weight of that portion of the body above the one diseased, while at the same time it does not interfere with the motions of the trunk, or with the free and full expansion of the chest, is the best adapted, not only to prevent deformity, but to put the patient in the best possible condition (so far as mechanical support can do it) for arresting the disease and promoting a rapid recovery. The best remedial measures in addition, are those which give the system the greatest amount of recuperative energy.

As disease of the cervical vertebræ is of rare occurrence, I will give the history of an interesting case showing the efficiency of my apparatus in treating the disease in this locality. March 10th, 1858, was called in consultation with Dr. Dewees of this city, to see the daughter of Mrs. D., aged 14. When seven years old, she had Potts' disease of the lower lumbar vertebræ destroying its body and allowing the one above to tilt forwards upon its lateral processes, thus producing an incurvation of the spine, so great as to compel her to throw back her shoulders to support the centre of gravity; this position of the shoulders renders the spine straight from the lumbar to the third cervical vertebræ, the seat of the second attack of the disease.

In the winter of 1856-7 she returned from boarding school, where she had been kept upon a light diet, complaining of pain in her neck, and her general health enfeebled. For some months she had experienced unpleasant sensations in her neck, sometimes amounting to pain whenever she leaned her head forward for any length of time.

Dr. Valentine Mott was immediately called, and she remained under his care until a short time previous to my being consulted. At this time there was almost entire paralysis of the body, the lower limbs contracted, the arms could be moved with a swinging motion, the hands unable to hold anything, and with but partial control of the sphincters of the body; the appetite precarious, and the body much emaciated. The head was resting upon the left shoulder with the face looking downward and to the right side, from which position she was unable to raise it.

That portion of the neck below the seat of the disease retained its natural position, while that above, together with the head, were at nearly right angles with it. It would seem impossible with such a displacement of the parts, that the spinal cord should escape serious lesion, yet the sequel proved that it was uninjured.

With this position of the parts, it was with some anxiety that the attempt was made to restore the head to its natural position, fearing that in some way the functions of the spinal cord might be destroyed. Extension was first made with the hands, considering this mode safer and more immediately under my control than any apparatus, should unfavorable symptoms manifest themselves. Perceiving no evil effects from extension, I applied my

apparatus for Potts' disease with the part for sustaining the head. By this means the head was brought quite erect, and as the sustaining medium is elastic, it continued to act by fatiguing the muscles and extending the soft parts that confined the head in its malposition until the latter assumed its natural position; here it was kept until there was sufficient deposit of bone or other substance to enable her to dispense with the apparatus.

[Photographed on Wood, from Daguerreotypes.]

During the treatment the apparatus allowed the full exercise of all the muscles connected with the head and neck, so far as could be permitted without displacement or injury to the parts.

In six months she was able to dispense with all artificial support, the head and neck performing all of their motions freely and naturally, with the exception of a little stiffness in arching the neck when attempting to throw the head forward and downwards. There remains some thickening about the locality of the lesion, much of which would have been avoided had the treatment been entered upon at an earlier period of the disease.

Judging from the rapidity of her recovery after the application of the apparatus, it is probable, had all pressure been removed at first, she would have been restored without any mark indicating the locality of the disease; and I would urge upon the profession the necessity of removing the pressure at once. In most cases, if this is done early, the inflammation will subside before ulceration takes place; or, if it has, it will be checked, and restoration and recovery soon follow.

Pressure will continue the ulcerative process, when it would stop were the pressure removed. After childhood, restoration will almost invariably commence as soon as the parts are separated; before this period, it is more uncertain, as the earlier the disease manifests itself, the greater is the constitutional tendency and the probability of its not stopping until the entire body of one vertebræ is destroyed, and in very bad constitutions it may extend to others.

Pressure upon an ulcerated vertebræ produces a general disturbance of the system, independent of any discharge from the parts, or from any pressure upon the spinal cord. For the lack of a better term, it is called irritation; that it is not from the direct effect of the disease upon the spinal cord, is evident, from the fact that the same symptoms are present when the ulceration is in the hip joint. That pressure is the principal, if not the only cause of the irritation, is clear; for if we relieve the pressure, the irritation subsides, and is rekindled whenever the parts are permitted to come in contact again. These results are most prominent in disease of the hip joint, following each other in rapid succession as pressure upon the diseased parts is allowed or removed.

To illustrate the effect of pressure upon the head of the femur affected with morbus coxarius, I will give the history of a case, so far as this effect is concerned. The result has been the same in all the cases that have been treated upon this principle.

A little boy, aged 4 years, was put under my care. His eyes were blue, hair light, complexion pale, figure slender. The father has premonitory symptoms of phthisis; the mother had, some years since, Potts' disease. In September, 1858, he was thrown down by another boy, and soon after began to complain of pain in his right knee—at first only during the night—and was a little sensitive about the hip in walking. Leeches were applied in the region of the hip joint; these appeared to relieve the pain, but did not restore the use of the limb; he grew worse until he was confined to the bed.

In February, 1859, I saw him for the first time. There were the ordinary symptoms of disease of the hip joint before the matter had escaped from the capsular ligament, viz., tumefaction about the joint, great tenderness, intolerance of motion, flabbiness of the muscles connected with the joint, flattening of the nates, the limb apparently elongated and drawn towards its fellow, the body leaning towards the pelvis upon that side, nocturnal pains upon the inside of the knee, referred to that region also upon any motion of the limb; countenance haggard and expressive of great suffering; the appetite deficient, except for acids. The slightest pressure about the joint, or movement of the limb, would cause him to cry out with pain.

Extension was made upon the limb, and after the muscles had become wearied so as to allow the head of the bone to come down upon the inferior portion of the acetabulum, the pain was relieved. The little sufferer was able to sleep quietly all night; the tenderness and tumefaction soon disappeared. In a few days the limb would admit of the application of my splint, which allows the patient to take out-door exercise, while at the same time the limb is kept down in the position mentioned.

The irritation of the system subsided with the other symptoms; his appetite became more than usual for a child with limited exercise; his food was well assimilated, for he improved in flesh and his countenance became comparatively ruddy. As he was so much

improved, and it being very inconvenient for me to attend him, upon the last of April I gave him in charge of a physician who had watched the treatment from the commencement. About the middle of June, the Doctor informed me that the limb was in a worse state than when I first saw him; that he was confined to his bed and suffered intensely; that the joint was much swollen, and he thought there was matter there; he also expressed distrust of the mode of treatment. Feeling entire confidence not only in the principle but the mode of applying it, and not liking to have it brought into disrepute, I went to see the case, and found his condition as represented by the Doctor. Upon examining the patient, it was evident that it was from a want of proper application of the principle, rather than in defiance of it, that the disease had returned. The limb was dressed as at first, and went on to recover more rapidly than from the first attack. He has played out for a long time. On September 15th I saw him, and he could throw his limb at right angles with his body, and his manner indicated that he had no fear of its causing pain. There is every prospect that he will recover with a perfect limb. Since the last attack, he has had no medicine; during the first, he took the bitter tonics to improve his appetite and power of digestion.

It will be noticed that this patient was relieved from two attacks. After he had quite recovered from the first, the head of the bone was allowed to impinge upon the upper portion of the acetabulum, kindling up the disease, the parts, if healed, not being of sufficient firmness to admit of the labor thrown upon them. In the last attack, the only treatment the child received was to remove the pressure from the diseased surfaces. The patient, from doing well while the pressure was removed, grew rapidly worse while it was allowed, until he was as bad as at first. Again the pressure was removed, and, without any other treatment, he amended, until the disease appeared to be entirely removed.

In all of the cases where this principle has been applied, the same favorable result has followed. This is not a new principle; it is involved in all those attempts to confine the parts and render the joint motionless, either by bandaging the limb, by splints that so far cover the hip as to render it immovable, but more marked in the operation of dividing the muscles connected with the joint, which, by their contractions, press the head of the bone upon the diseased surface. I have been informed that this division relieves entirely the pain, and the patient remains comfortable until union takes place and the muscles begin to contract, again producing pressure, then the pain returns as before.

These facts go far to show the intimate connection between the pain and the pressure, if they do not prove conclusively that they stand in the relation of cause and effect.

The plan adopted by me appears to accomplish this separation of the parts more perfectly than any mode with which I am conversant, while at the same time it admits of passive motion of the

joint (a much more natural state for health than one of perfect rest), and free out-door exercise by walking or riding. I can but consider it highly beneficial to keep up motion of the joint, yet not to allow of friction upon the diseased surface. Ulceration indeed may continue when the parts are kept perfectly still, that would stop, if free motion were permitted without friction.

A case in which menstruation is performed without any direct or apparent communication between the cavity of the vagina and that of the uterus, the latter being ascertained to exist in a rudimentary condition. By BERNARD KELLY, M.D., Physician to the New York Dispensary. M. C., aged 28, of delicate form, and blond complexion, came under my professional charge about three months ago. She has been married about a year, and menstruates *regularly* every three weeks. The secretion is scant, and of brief duration, continuing usually only one or two days. This condition of the menses induced me to make a vaginal examination, which, to my surprise, revealed a somewhat rare anomaly. The external organs of generation are well developed. The vagina is of the usual calibre, but very short, extending only about two inches from the vulvar ring, and terminating superiorly in a species of irregular *cul de sac.* On the left extremity of this pouch is a sulcus, or valve-like process, which gives to the touch the sensation as if it were of an aperture communicating with the uterus, but which no manipulation with bougie or catheter could corroborate. The employment of the speculum threw no more satisfactory light upon the obscurity of the case, all that had been presented on the field of view being merely a tense, imperforated membrane. The question immediately arose to my mind, as to the immediate and direct source of the menstrual flux. Could it be from the walls of the vagina, or from some secret orifice connected with the womb, and which my means of exploration were unable to detect.

The case being somewhat unique in its character, I thought it expedient, as well as just, to have the opinion concerning it of an able and more experienced head than my own. With this view, I consulted Professor WILLARD PARKER, who kindly tendered his services, and made a very minute and laborious investigation of the case. The Doctor candidly acknowledged his entire inability to trace any direct communication between the vagina and the cavity of the uterus ; indeed the presence of the latter was even a matter of doubt. To decide this question he made an examination *per rectum*, and concluded that the organ existed, but in a somewhat imperfect and rudimentary state of development. In order to ascertain the true seat of the catamenia, he requested me to show him the patient during her approaching period, when the discharge had reached its height. This I was unable to do, from the fact that the Professor was out of town at the time, but was fortunate enough to find a good substitute in his stead, in Dr. WATTS.

After a good deal of patient and fatiguing manipulation, the

Doctor succeeded in passing the blunt end of a probe *into, not through*, a very minute depression, situated about the centre of the *cul de sac* of the vagina. The head of the instrument was merely engaged, arrested, so to speak, at this point, but beyond it could not pass without using excessive force, and running the risk of lacerating the parts. This, in all probability, must have been a mere crypt or fold of the mucous membrane, and not connected in any way with the cavity of the uterus. When the part was wiped dry, by means of a pledget of cotton, from the menstrual exudation, no fresh discharge made its appearance. This would seem at least to confirm the opinion that the depression mentioned was not the channel through which the menses flowed. The same fact (namely the persistent dryness of the mucous membrane) was noticed in wiping the secretion from the surrounding walls of the vagina. The detergent process was thoroughly performed, so that the pressure necessarily made on the parts, and the action of the atmosphere having full scope through the cylinder of the speculum, might very effectually arrest the capillary hemorrhage. Be this as it may, the fact stands prominently forward as an element, calculated to lend additional complication and obscurity to the case.

Now some important considerations present themselves to the mind of the physician, on reviewing the whole matter. Here is a patient, who, according to her own statement, and verified by actual observation, menstruates every three weeks with a regularity, in reference to time, which cannot be surpassed; no opening found connecting the cavity of the vagina with that of the uterus; the subject possessing the apparent fragile conformation, and all the other delicate qualities of her sex, a sweet feminine voice; a nervous, timid disposition, so as to preclude all idea of imposture, on her part, from the mind of the practitioner; and, yet, the true source of the menses still remains shrouded in mystery. For my own part, I am inclined to believe that the discharge takes place directly from the vaginal mucous membrane. The imperfectly developed state of the uterus, and the impossibility of finding any patent, natural channel between it and the vagina, confirm this belief. If so, it may then very reasonably be asked, why does not the secretion reappear after being removed in the manner above alluded to? To this question I can return no better answer than the one already implied, when it was stated that considerable pressure had been applied to the parts, and that they were exposed, in this dried condition to the free action of the air.

Such an anomally would not be altogether without precedent. CAZEAUX in his work on midwifery, cites the example of a young woman, somewhat similarly organized to the subject of this notice, who had never been regular (although the *molimen menstruale* had been experienced by her periodically), but twice in her life. On one occasion some months previous to, and again immediately after sexual congress; to the impetuous ardor of which she attributed the appearance of the latter, rather than to any

spontaneous effort on the part of nature. In both instances, the discharge must necessarily have proceeded from the mucous membrane of the vagina, since the uterus was ascertained to be congenitally absent, and both ovaries occupied the inconvient position of each inguinal canal, immediately above their external orifice.

Accidental Poisoning by Strychnine.—By Douglas Bly, M.D., of Rochester, N. Y. Saturday, September 13, 1856, Mr. Josiah Montgomery, residing at No. 18 Jay Street, swallowed four grains of strychnine, mistaking it for a powder that had been prescribed for himself. Mr. M., had sometime since procured a quantity of strychnine for the purpose of killing dogs during the hot season, and by some means the strychnine powder and the powder prescribed and prepared for himself, became mixed, and on Saturday night about ten o'clock he took one of the powders which he supposed prepared for himself, but unfortunately it was one of the dog powders, and contained four *grains* of *Strychnine.* He immediately discovered his mistake, and ran into Dr. Swinburns, a few doors distant. Dr. S., immediately prescribed an emetic, which I believe was composed of tartarized antimony, and in a few minutes followed it with another, but both failed to produce any effect, and the ordinary symptoms of strychnine began to show themselves. Seven or eight minutes had now elapsed, and nearly every muscle had become rigid. It was found impossible to administer any more emetics, because the muscles of the jaws had became rigid and held the teeth firmly in contact, and the patient was no longer able to swallow.

I arrived fifteen minutes after the poison was taken, and found the patient lying upon the floor, on his back, convulsed constantly with the severest form of tetanic spasms. At times his whole muscular system was rigid, and he lay in the opisthotonose position, resting upon his head and heels, with the body raised from the floor in the form of an arch. Several of these terrible spasms occurred in the space of a minute. His jaws were firmly locked, and the approach of anything toward his mouth, caused a recurrence of the spasms.

When called I hurriedly supplied myself with tartar emetic, a stomach pump, and chloroform. On my arrival I discovered that the chloroform was the only remedy that could be employed. I gave it by inhalation, and was gratified to see the spasms partially relieved in about three minutes, and completely arrested in ten. If the chloroform was remitted the spasms instantly returned in full force ; it was found necessary, therefore, to keep the patient constantly under the influence of the anæsthetic. Ten minutes after I began its administration, the patient was so relieved that he was able to swallow again, and I gave him a full dose of tart. emetic, which was the third he had taken from the beginning. In about ten minutes more the emetic took effect. Warm water was now given in large quantities and rejected, as often as sufficient quantity was drank, until it was believed

that the stomach was relieved of all the strychnine not absorbed. All this time it was necessary to continue the chloroform to control the spasmodic action of the muscles, caused by the strychnine already absorbed, which must have been no smal amount ; as thirty-five or forty minutes had elapsed, between the taking of the poison and the first emesis. If the chloroform was stopped at any time, the spasms immediately returned, therefore I was obliged to continue the chloroform until the next morning, when the patient was out of danger.

At six o'clock I left him quiet and comfortable. The first decided symptom of returning ease occurred at three o'clock, when the patient requested a chew of tobacco, in which he was indulged. From the time the tetanic spasms ceased, the patient rapidly recovered, and in forty-eight hours considered himself entirely recovered.

EDITORIAL.

A New Artificial Leg.—We have been favored by Dr. Bly, of Rochester, N. Y., with the accompanying Illustrations of an artificial leg, which he has lately introduced, and which has, we believe, proved very satisfactory to those who have used it.

Fig. 1.

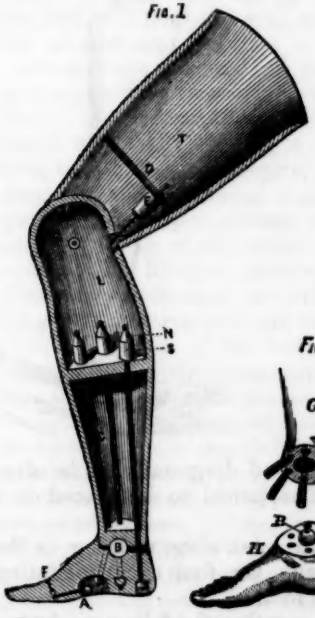


Fig. 3.

Fig. 2

Fig. 1 is a section of the Artificial Leg. The ankle joint is formed by a ball *(B)* of polished ivory, which is a joint that admits of every motion that the natural ankle does, without an exception.

The cords *(C)* assume the position and functions of the natural tendons. Only three of the five are shown in full, but the ends of all are seen in *Fig.* 3. *S* is three of the five rubber springs, which take the place of the muscles of the natural leg. *N* is the nuts, by which the tension of the cords and springs are regulated to suit the wearer. *E* is the spring which operates the knee joint.

Fig. 2 is a posterior view of the leg and thigh ; the thigh in section—showing the knee cords *(K)* which take the place of the crucial ligaments of the natural knee.

Fig. 4

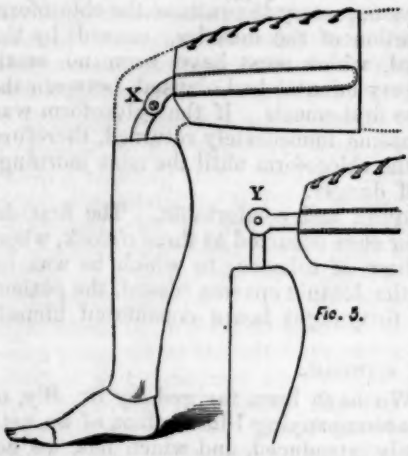


Fig. 5.

Fig. 4 shows the curved joints (*X*) on either side of the knee, as constructed for amputations below the knee. The curve corresponds with the natural knee, and allows the pants to set smoothly.

And *Fig.* 5 shows the joints (*Y*) for the same purpose, as constructed by some makers.

Fig. 6. The right leg of this figure shows one of these Legs, worn by a mechanic, and flexed laterally at the ankle joint, the same as a natural leg. It assumes every other position of the natural leg with equal facility.

Fig. 6

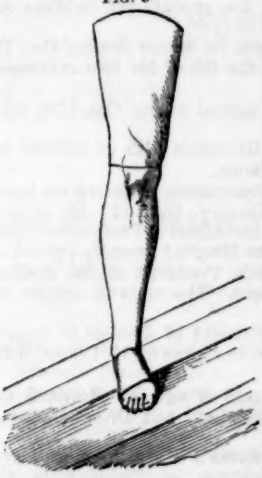
Fig. 8

Fig. 8 represents the ankle joint flexed diagonally, as is often the case when one side of the foot happened to be placed on a small stone, or other obstacle.

Fig. 9 shows the action of the ankle joint when walking on the side of a hill, or on an inclined plane, the foot accommodating itself to the surface, like the natural foot.

From the inventor's statements, we gather the following facts :—The joints in this leg are made without iron or any kind of metal, therefore the leg is extremely light. The liability of metallic joints to rattle and make a noise, after the leg has been worn

FIG. 9



a short time, is well known, and the annoyance which it causes the wearer at every step is also well known. Now, as there is no metal about the joints in this leg, there is no noise. The ankle joint is formed by a ball of polished ivory, plying in a socket of vulcanized india rubber. This joint accomplishes the great object which the Artificial Leg makers have hitherto sought for in vain, viz.: it admits of motion in all directions, like the natural ankle joint, and thereby allows the artificial foot to accommodate itself to the varied inequalities of the surface, the same as the natural foot.

In the places corresponding to those occupied by the muscles of the natural leg are placed rubber springs, with catgut cords of sufficient strength, extending downward in place of the natural tendons. These rubber springs or artificial muscles, together with the ball and socket joint, produce every motion of the natural leg, without an exception.

The springs are made of railroad car spring rubber, and used by compression, therefore it is not possible to overtax or break them. The power and action of all the springs in this leg, are regulated simply by turning a nut, so that the wearer may adjust them to suit his own peculiar gait, with the greatest facility. Instead of the mechanical motions given to a limb by metallic springs, the rubber springs impart easy uniform motions to the limb, like those of the natural muscles, which give it, when in use, a remarkable life-like appearance. In walking, when the weight of the body rests upon the ball of the foot, the spring representing the gastrocnemius and soleus muscles is firmly compressed, and when the weight of the body is thrown forward on to the other foot, the spring rises and carries the foot forward to its place, with very little effort of the wearer.

In ordinary walking, with the toes turned outward, the foot, like the natural one, is flexed diagonally, or in the line of motion which makes a graceful step. All artificial legs made heretofore, roll the foot to compensate for this diagonal flexion,—hence the uneven gait so often seen. If the foot is turned out sidewise to brace the body, or to work at a bench, as in many kinds of mechanical labor, the ankle joint flexes laterally, and the foot remains flat on the ground, and gives a firm base of support, which is of great importance in all kinds of labor.

We have not sufficient practical acquaintance with this leg to give an opinion of its merits. Use alone can determine its true value.

Fig. 4

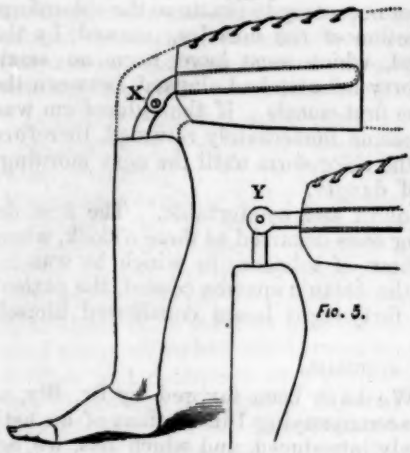


Fig. 5.

Fig. 4 shows the curved joints (*X*) on either side of the knee, as constructed for amputations below the knee. The curve corresponds with the natural knee, and allows the pants to set smoothly.

And *Fig.* 5 shows the joints (*Y*) for the same purpose, as constructed by some makers.

Fig. 6. The right leg of this figure shows one of these Legs, worn by a mechanic, and flexed laterally at the ankle joint, the same as a natural leg. It assumes every other position of the natural leg with equal facility.

Fig. 6

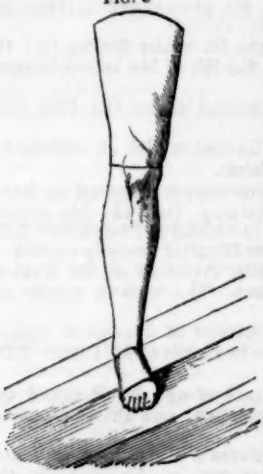
Fig. 8

Fig. 8 represents the ankle joint flexed diagonally, as is often the case when one side of the foot happened to be placed on a small stone, or other obstacle.

Fig. 9 shows the action of the ankle joint when walking on the side of a hill, or on an inclined plane, the foot accommodating itself to the surface, like the natural foot.

From the inventor's statements, we gather the following facts: —The joints in this leg are made without iron or any kind of metal, therefore the leg is extremely light. The liability of metallic joints to rattle and make a noise, after the leg has been worn

FIG. 9



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We have not sufficient practical acquaintance with this leg to give an opinion of its merits. Use alone can determine its true value.

THE SCIENTIFIC RECORD is the title of a Physician's ..ing list about to be issued by Bailliere Brothers, which will afford to the practitioner facilities for keeping an accurate daily record of his cases.

THE COLLEGE OF PHYSICIANS AND SURGEONS began its winter Session Oct. 17, with an introductory address by PROF. CLARK, on the life of his late colleague, Prof. Elisha Bartlett.

THE UNIVERSITY MEDICAL COLLEGE opened its annual course Oct. 17th, with an introductory address by PROF. VAN BUREN.

THE NEW YORK MEDICAL COLLEGE commenced its session with an address by PROF. BRYAN, on the Medical Profession and its claims.

AT THE NEW YORK OPHTHALMIC HOSPITAL, DR. STEPHENSON delivered the introductory lecture to his course on Ophthalmic Surgery, Oct. 22; his subject being—The Pains, Pleasures, and Responsibilities incidental to Professional Life.

THE COURSE OF CLINICAL INSTRUCTION in Bellevue Hospital formally opened on the 17th of October, with addresses by Dr. Francis, President of the Medical Board, and Drs. A. H. Stevens, Metcalfe, and Gilman. The class in regular attendance is large.

A SANATORIUM, OR PRIVATE RETREAT for the treatment of diseases of women has recently been opened in this city, and is to be in charge of W. Elmer, M.D., and L. Elsberg, M.D.

DR. ELI IVES, of New Haven, now eighty-one years of age, has declined the office of Secretary of the American Medical Association, and Dr. Stephen G. Hubbard has been appointed in his place.

THE PHYSICIAN'S VISITING LIST, and the PHYSICIAN'S HAND-BOOK OF PRACTICE—the former published by Lindsay & Blakiston, of Philadelphia, the latter by W. A. Townsend & Co., of New York—are issued for 1860.

DR. MACFARLAN, of this city, calls our attention to an article which he published in this Journal of November, 1854, in which are detailed four cases of croup treated by quinine.

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Tomes (John.) A system of Dental Surgery, with two hundred and seven illustrations. Philadelphia: Lindsay & Blakiston, 1859.

Taft (J.) A Practical Treatise on Operative Dentistry. With eighty Illustrations. Philadelphia: Lindsay & Blakiston, 1859.

Paget (James.) Lectures on Surgical Pathology, delivered at the Royal College of England. Second American Edition. Philadelphia: Lindsay & Blakiston, 1860.

Halliday (Samuel B.) The Lost and Found, or Life among the Poor. New York: Blakeman & Mason, 1859.

Parrish (Edward.) An introduction to Practical Pharmacy: designed as a Text-Book for the Student, and as a Guide for the Physician and Pharmaceutist; with many Formulas and Prescriptions. Philadelphia: Blanchard & Lea, 1859.

A Treatise on Syphilis in New-Born Children and Infants at the Breast. Translated by G. Whitley, M.D. The New Sydenham Society, London, 1859; vol. i.

Gooch on some of the most Important Diseases peculiar to Women; with other Papers. Prefatory Essay by Robert Ferguson, M.D. New Sydenham Society, London, 1859; vol. ii.

Memoirs on Diphtheria. From the Writings of Bretonneau, Guersaut, Trousseau, Bouchut, Empis, and Daviot. Selected and translated by Robert Hunter Semple, M.D., with a Bibliographical Appendix. By John Chatto. The New Sydenham Society, London, 1859; vol. iii.

Habershon (S. O.) Pathological and Practical observations on Diseases of the Alimentary Canal, Œsophagus, Stomach, Cæcum, and Intestines. Philadelphia: 1859.

Lizars (John.) The Use and Abuse of Tobacco. From the eighth Edinburgh edition. Philadelphia: Lindsay & Blakiston, 1858.

Miller (James.) Alcohol—its place and Power. From the nineteenth Glasgow edition. Philadelphia: Lindsay & Blakiston, 1859.

Flint (Austin.) A Practical Treatise on the Diagnosis, Pathology, and Treatment of Diseases of the Heart. Philadelphia: Blanchard & Lea, 1859.

Paine (Martin.) The Institutes of Medicine. Fifth edition. New York: Harper & Brothers, 1859.

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THE WOOD PRIZES, BELLEVUE HOSPITAL.

THE PRIZES offered by DR. JAMES R. WOOD to the Matriculated Students for the terms 1858–9 and 1859–60, in the College of Physicians and Surgeons, 23rd Street, University College, 14th Street, and the New York Medical College, 13th Street, for the best

ANATOMICAL OR SURGICAL PREPARATION,

to be placed in the Museum of Bellevue Hospital, will be awarded by the Professors of Surgery and Anatomy, in the above College, on MONDAY, March 5, 1860.

TIMOTHY DALY,
Warden of Bellevue Hospital.

NEW YORK, September 26, 1859.

NEW YORK OPHTHALMIC SCHOOL.

The EIGHTH SESSION of the above Institution will be commenced October 22d, at half past Seven, P. M., and continue until the 1st of March, at the New York Ophthalmic Hospital, No. 6 Stuyvesant Place, near the junction of Third Avenue and Ninth Street,

Clinics every Tuesday and Thursday, from 1½ to 2½ P.M., by Drs. STEPHENSON and GARRISH.

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Dr. STEPHENSON'S *Essay on the Treatment best adapted to each variety of Cataract*, can be obtained from Mr. J. Smith, the apothecary of the hospital. Five copies, $1; single copies, 25 cents, in postage stamps, sent per mail to any part of the United States. The avails of which are given to the Institution.

The *Medical Press* says of this work :—"This is a very practical essay on the important subject of Cataract, by one of our most experienced Ophthalmic Surgeons, whose name, in connection with diseases of the eye, has been long and favorably known to the profession. It is illustrated by five beautiful lithographic engravings, which are worth far more than the price of the pamphlet.

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EXTRACTS FROM MEDICAL JOURNALS, ETC.

From the American Medical Gazette for Oct., 1859.

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From the N. Y. Medical Press, Sept. 24, 1859.

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New York, Dec. 1, 1858. 6–6